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TELEPHONE
1852
NUMBER



THE CHEMIST AND DRUGGIST

TELEGRAPHIC
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CHEMISTS LONDON.

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LONDON:
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Branch Offices:
MELBOURNE,
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ESTABLISHED IN
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NOVEMBER 23, 1889.

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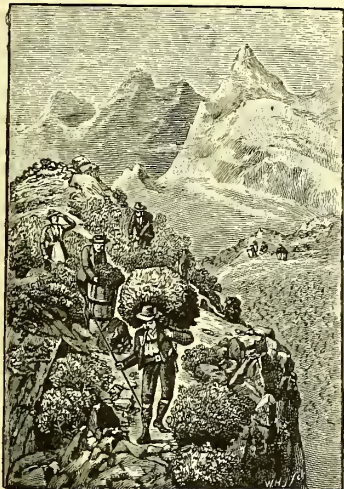
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THIS Company is formed for the purpose of acquiring and further developing the business of Messrs. H. H. Warner & Co., of Rochester, New York, and elsewhere. Mr. H. H. Warner is the sole Proprietor of the proprietary preparations known as Warner's "Safe" Remedies, Warner's "Log Cabin" Remedies, and Warner's "Safe" Yeast, together with the various properties and businesses in the United States, Canada, England, Germany, Austria-Hungary, and Australia.

These preparations are sold in almost every part of the civilised world. In the United States, where they have been longest before the public, the total number of voluntary testimonials received is almost beyond belief. The large profits derived from proprietary medicines are well known.

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The magnificent fire-proof building in Rochester, N.Y., especially constructed for this business, of brick, iron, and plate-glass, eight storeys in height, and having three and one-tenth acres of flooring (8,478,370 cubic feet of storage room), is freehold, and will be conveyed free from incumbrances. It is fitted with most modern appliances and machinery for carrying on the business.

The premises in London, Toronto, Melbourne, Frankfort-on-the-Maine, and Pressburg are held on short tenancies.

The Trade Names and Marks, which are registered in the principal countries, are of great importance and value.

ACCOUNTANTS' CERTIFICATE.

The books of the Vendor have been examined by Messrs. Turquand, Youngs & Co., the well-known firm of Chartered Accountants, and the following is the Certificate given by them:—

41 Coleman Street, London, E.C., November 1, 1889.

We have examined the books of Mr. H. H. Warner, of Rochester, U.S., for the period of 7 years from August 31, 1881, to August 31, 1888, and find that for that period the total sales of the "Safe" Remedies in the United States amounted to \$9,356,303.77, and the profits amounted to \$3,035,682.87, or a yearly average of \$433,669, or, at \$4.85 per £, = £89,416.

The total sales in Canada from the commencement of business there in 1883 to December 31, 1888 (a period of six years), amounted to \$437,993.16, and the profits \$85,242.65, or a yearly average of \$14,207, = £2,299.

The total sales in Australia, according to the returns received from the commencement of business there in May, 1885, to April 30, 1888 (a period of three years), amounted to £83,320 11s. 11d., and the profits amounted to £37,579 11s. 11d., or a yearly average of £12,526 10s. 8d., those for the last year of the period amounting to £25,289.

Branches of the business were established in London in 1886, in Frankfort, Germany, in 1886, and in Pressburg, Hungary, in 1888, and a considerable sum has been expended in connection therewith.

The sales in England and Germany have been as follows:—

IN ENGLAND.					
For 11 months ending 31st December, 1886	...	...	...	£12,500	7 2
" 12 " " 1887	...	...	...	43,479	5 10
" 12 " " 1888	...	...	...	62,727	7 1
IN GERMANY.					
For 6 months ending 31st December, 1886	...	...	...	43,592 25 mks.	
" 12 " " 1887	...	...	...	199,222.97	"
" 12 " " 1888	...	...	...	251,696.14	"

In October, 1885, Mr. Warner commenced the manufacture, as a separate business, of Warner's "Safe" Yeast, and in October, 1887, he commenced introducing Warner's "Log Cabin" Remedies. A very large amount of expense has been incurred in advertising these articles, the net outlay on the "Safe" Yeast business to December 21st, 1888, having amounted to \$207,046.19, and on "Log Cabin" remedies to August 31, 1888, to \$316,294.34.

(Signed) TURQUAND, YOUNGS, WEISE, BISHOP & CLARKE.

The certified average annual net profits of the "Safe" Remedies in the United States for 7 years, as shown above, have been	...	...	...	...	£89,416
The certified average annual net profits of the "Safe" Remedies in Canada for 6 years have been	...	...	...	...	2,929
The certified average annual net profits of the "Safe" Remedies in Australia for 3 years have been	...	...	...	...	12,526
Together	...	...	...	...	£104,871
Add annual profit (guaranteed for 3 years from 31st July, 1889, by Mr. Warner) from the manufacture and sale of "Log Cabin" Remedies and "Safe" Yeast	...	...	...	...	15,000
	...	...	...	...	£119,871

This estimate includes nothing for the profits to be derived from the businesses established in England, Germany, and Austria-Hungary, which may reasonably be expected to largely increase the annual net profits in the future.

The Annual Interest on £150,000 Debentures at 6 per cent. will require	...	...	...	£9,000
The Annual Dividend on £200,000 Preference Shares at 8 per cent. will require	...	...	...	16,000
A dividend of, say, 15 per cent. on £350,000 Ordinary Shares will absorb	...	...	...	52,500
Together	...	...	...	£77,500

Leaving, on the above estimate of profit, which is believed to be moderate and safe, and with capabilities of material extension, a surplus of 42,371l. available for the formation of a Reserve Fund, paying off Debentures, or for further Dividend on the Ordinary Shares, as may hereafter be decided.

The price to be paid by the Company for the entire business as a going concern, to be taken over as from 31st July, 1889, including the goodwill, trade names and marks, prescriptions and recipes, freehold and leasehold properties and buildings in America and elsewhere, fixed and movable plant and machinery, fixtures and utensils at Rochester, N.Y., and the different branch houses, cash in hand and at bankers, the stocks-in-trade (consisting of wholly and partly manufactured stock, raw material, and advertising matter), furniture and all property used in connection with the businesses, together with the benefit of all current contracts entered into by Mr. Warner in relation thereto, is £700,000; payable as to

£50,000 in Debentures—	{ Being one-third of each issue, and the largest amount permitted by the Rules of the London Stock Exchange.
66,660 in Fully-paid Preference Shares	
116,660 " Ordinary Shares	
166,660 in Cash or Preference and Ordinary Shares, or part of each at the option of the Company, and	
300,000 in Cash.	
£700,000	

The Company will not take over any of the liabilities of the Vendor prior to 31st July, 1889.

Subject to the charge to be given to the Railway Share Trust and Agency Company, Limited, as Trustees for the Debenture Holders, the freehold property at Rochester, N.Y., will be conveyed to an American Corporation, to be formed in New York State, under the control of this Company, or in such other form as may be advised, to comply with the laws of the State of New York.

Mr. Warner, who has personally superintended the growth of the business to its present dimensions, and who only desires to be partly relieved of the exacting claims upon his time and attention which the exclusive ownership of a concern of such magnitude involves, retains as large an interest in the different securities of the Company as the Rules of the Stock Exchange permit, and has agreed to act as Managing Director for a term of five years, not receiving any remuneration in any year unless the net profits amount to £117,000, and then only out of the surplus profits in excess of that sum, and has further agreed, while acting in that capacity, to hold at least 5,000 of the Ordinary Shares of the Company, of the par value of £50,000. Provisions have been inserted in the contract of purchase for the protection of the Company against opposition in trade on his part.

The various departments and branches will be carried on as heretofore under the same experienced managers and competent assistants.

For Agreements see Full Prospectus, which with Forms of Application can be obtained at the Temporary Offices of the Company, and from the Bankers, Brokers, and Solicitors.

London, November 21, 1889.

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Mr. E. S. Carruthers, Manchester.	Mr. F. J. Smith, Edinburgh.
Mr. A. L. W. Fechtner, Hull.	Mr. J. H. Weston, Holyhead.
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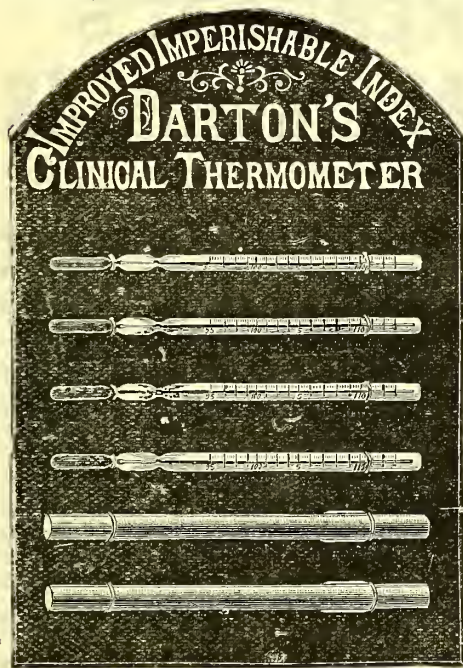
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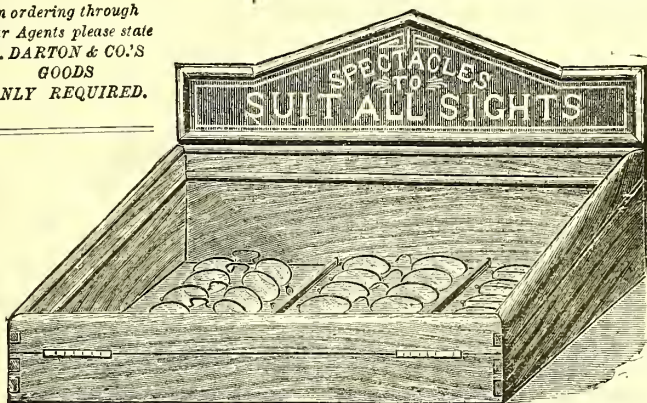
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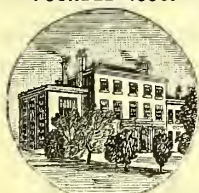
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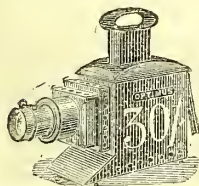
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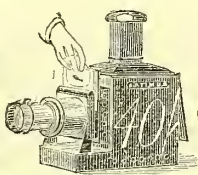
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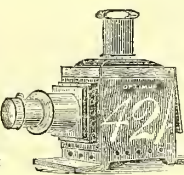
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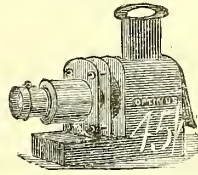
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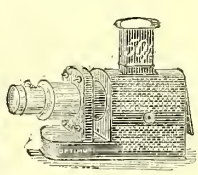
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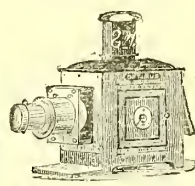
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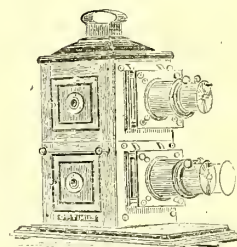
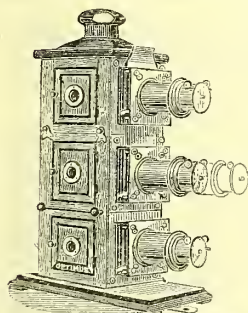
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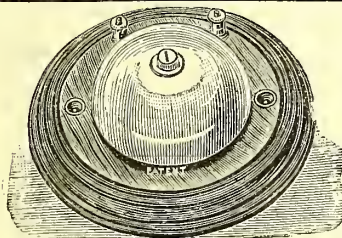
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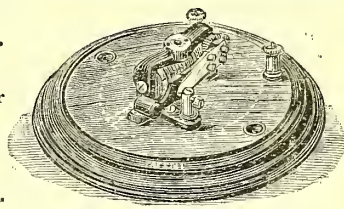
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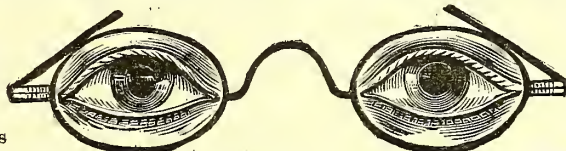
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The Chemist and Druggist, complete, with advertisements, for 1888, and January 5, 1889. Send price to 136/32.
A medium-sized portable vulcanizer and flasks; also a quantity of teeth, assorted. "Dentist," 172 Islington, Liverpool.
Sponge case, as Maw's fig. A 45 or A 46; also one or two show stands as Maw's fig. 3; must be cheap, and in good condition. Robinson, Chemist, Baildon.
Pill machine, 4-grain, mortars, ointment slab, or other articles in common use, also show jars for ointments, 2 or 3 lbs. State condition and price to "Chemist," 84 Torriano Avenue, Camden Road, N.W.

JOHNSON & JOHNSON

NEW YORK and LONDON,
MANUFACTURING CHEMISTS,
MANUFACTURERS OF ALL VARIETIES OF

MEDICINAL AND SURGICAL PLASTERS IN RUBBER COMBINATION

(PERFORATED AND PLAIN), AND ISINGLASS AND MUSTARD PLASTERS.

ALSO MOIST ANTISEPTIC DRESSINGS & ABSORBENTS.

IMPROVED BELLADONNA PLASTER.

Increased action by the addition of Boracic Acid and a mild rubefacient, by which the activity of the cutaneous glands is stimulated, and their power of absorption increased.

We have succeeded in greatly increasing the therapeutic value of Belladonna and other Plasters.

FIRST.—By preparing the mass in a manner calculated to promote a more rapid absorption of the incorporated drug.

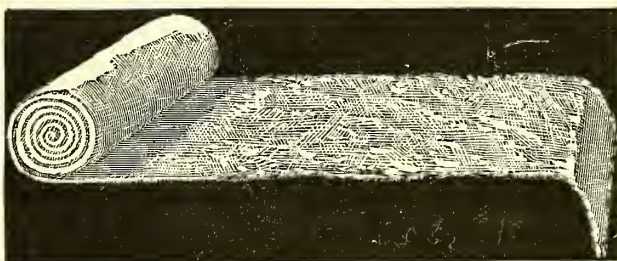
SECOND.—By employing (in Belladonna Plaster) a more reliable extract of the drug than is commonly used.

The attention of manufacturers of Medicated Plasters has hitherto been directed chiefly toward perfecting the mechanical excellence of their preparations, overlooking, to a certain extent, the real end and aim for which Plasters are made.

The extent to which counter-irritants, solvents, detergents, &c., can be utilised in Plasters to produce a mechanic chemical alteration of the epidermis, thus rendering the skin more absorptive, has been largely if not entirely overlooked.

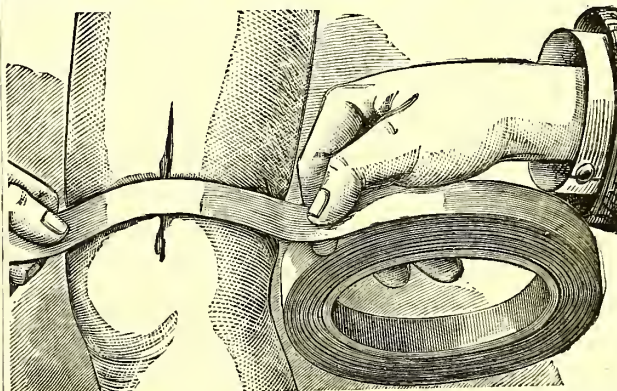
By the addition of Boracic Acid and a mild rubefacient to the regular Belladonna Plaster formula, several important advantages are secured. The fatty matter in the pores is dissolved by the detergent action of the former, and the glands are expanded and stimulated by the counter-irritative action of the latter, by which means not only is a larger proportion of the medicinal element of the Plaster absorbed, but the therapeutic effect is both increased and more rapidly obtained.

ABSORBENT COTTON IN EVEN SHEETS
Rolled with Tissue Paper between them to prevent felting.



Cotton in this form is as easily applicable as an ordinary cloth bandage.
Its advantages can be seen at a glance.
Supplied in all sized Packets from 1 oz. to 1 pound.

RUBBER ADHESIVE PLASTER ON HOLLOW CYLINDERS.



Pronounced by Surgeons to be the most convenient form ever devised for adhesive plaster. Besides its convenience it is much cheaper than rubber adhesive plaster on spools. It is put up in width varying from $\frac{1}{2}$ an inch to 3 inches, 5 yards long, in neatly decorated tin boxes.



ANTISEPTIC TABLETS.

The increasing demand for antiseptic agents in a convenient form has induced us to prepare Corrosive Sublimate Tablets after the following formula:

Corrosive Sublimate, gr. 7, 3.

Ammonium Chlor., gr. 7, 7.

The ammonium chloride is used to make the solution permanent so that the corrosive sublimate will not be precipitated by the organic matter usually contained in water. Each Tablet contains the requisite amount of corrosive sublimate to make a solution of 1-1,000 when added to a pint of water.

Our goods are supplied by all the leading Wholesale Houses in Great Britain and Ireland, also by our
SOLE WHOLESALE AGENTS, H. C. MASON & CO., 1 & 2 AUSTRALIAN AVENUE, LONDON, E.C.
who will be glad to forward Lists and terms on application.

When ordering through the Wholesale Houses care should be taken to specify the goods of JOHNSON & JOHNSON'S Manufacture.)

TO AERATED WATER MANUFACTURERS

HAY'S

SOLUBLE ESSENCES

REGISTERED
ARE GUARANTEED TO BE THE FINEST IN THE MARKET

Honourable Mention; International Food Exhibition, Agricultural Hall, London, Oct., 1880. Gold Medal: Soc. of Arts, Paris, 1882.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER,
A Pure Essence of the Finest Ginger.
Trade Price 5/ per lb.; 12 lbs. and upwards, 4/6.

HAY'S FORTIFIED ESSENCE OF JAMAICA GINGER.
For First Quality Ginger Ale.
Trade Price 5/6 per lb.; 12 lbs. and upwards, 5/.

HAY'S GINGER ALE EXTRACT,
For Second Quality Ginger Ale.
Imparts Pungency, Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma.
Trade Price 4/6 per lb.; 12 lbs. and upwards 4/.

HAY'S GINGER ALE ESSENCE,
For Third Quality Ginger Ale.
This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
Trade Price 9/ per lb.; 12 lbs. and upwards, 8/6.

THESE ESSENCES
Have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other countries.



For ORANGE, VANILLA, and all other Essences,
SEND FOR PRICE LIST.

HAY'S HOP ALE ESSENCE.
For the manufacture of the Finest Aerated Hop Ale. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
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HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.
No. 1. Highly Concentrated.
Trade Price 8/6 per lb.; 2 lbs. and upwards 8/.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS;
No. 2. Makes an exquisitely fine Lemonade.
Trade Price 6/6 per lb.; 12 lbs. and upwards, 6/.

HAY'S LEMON FLAVOUR.
Imparts a Lemonade all the Fine Aroma and Flavour of the choicest Lemons.
Trade Price 5/ per lb.; 12 lbs. and upwards 4/6.

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CHEMIST
BEVERLEY ROAD

HIGHLY CONCENTRATED ESSENTIAL OILS.

(OLEA ÆTHERIA SINE TERPENO.)

PATENT, HEINRICH HAENSEL, PIRNA-on-ELBE.

Awarded 8 Highest Prize Medals (Philadelphia, 1876—Gold Medal; Melbourne, 1889).

Patent Oil of LEMON (Sp. gr. 0.9003) .. 30 times concentrated.	Patent Oil of ANISEED, CASSIA, CLOVES,	2 times concentrated.
" " ORANGE (Sp. gr. 0.9090) .. 30 " "	and PEPPER MINT ..	" "
" " ANGELICA (Sp. gr. 0.947) .. 30 " "	CARAWAY and LAVENDER 2½ " "	" "
" " .. 30 " "	&c. &c. &c.	" "

Haensel's method of manufacture effects a complete removal of the Terpenes, Compounds of Carbon and Hydrogen, from the Essential Oils. They are the *Purest Essential Oils known*, and not only possess the *strongest*, but also the *finest* aroma of the *fresh fruit or seeds* from which they are made.

They are already most extensively used throughout the world in the manufacture of concentrated fruit essences, tinctures, liquors, toilet and mineral waters, high-class confectionery, &c.

1 oz. of Patent Oil of Lemon represents 30 oz. of ordinary Oil of Lemon.

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Perfect in Mechanical and
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Durable, Easily Cleaned.

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The ONLY GENUINE are made SOLELY by the Sons of the late Mr. Lipscombe. As there are watches and watches, so there are Filters and Filters, and the Trade are Cautioned against feeble Imitations of Lipscombe's Filters. To avoid grave disappointment, address—
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This Caution is necessary as we have no connection with any other Firm TRADING under the same name—Caveat Emp'or.

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ANDREWS' FILTERS

No. 1, 12/6.

FOR THICK LIQUIDS.

No. 2, 18/6.

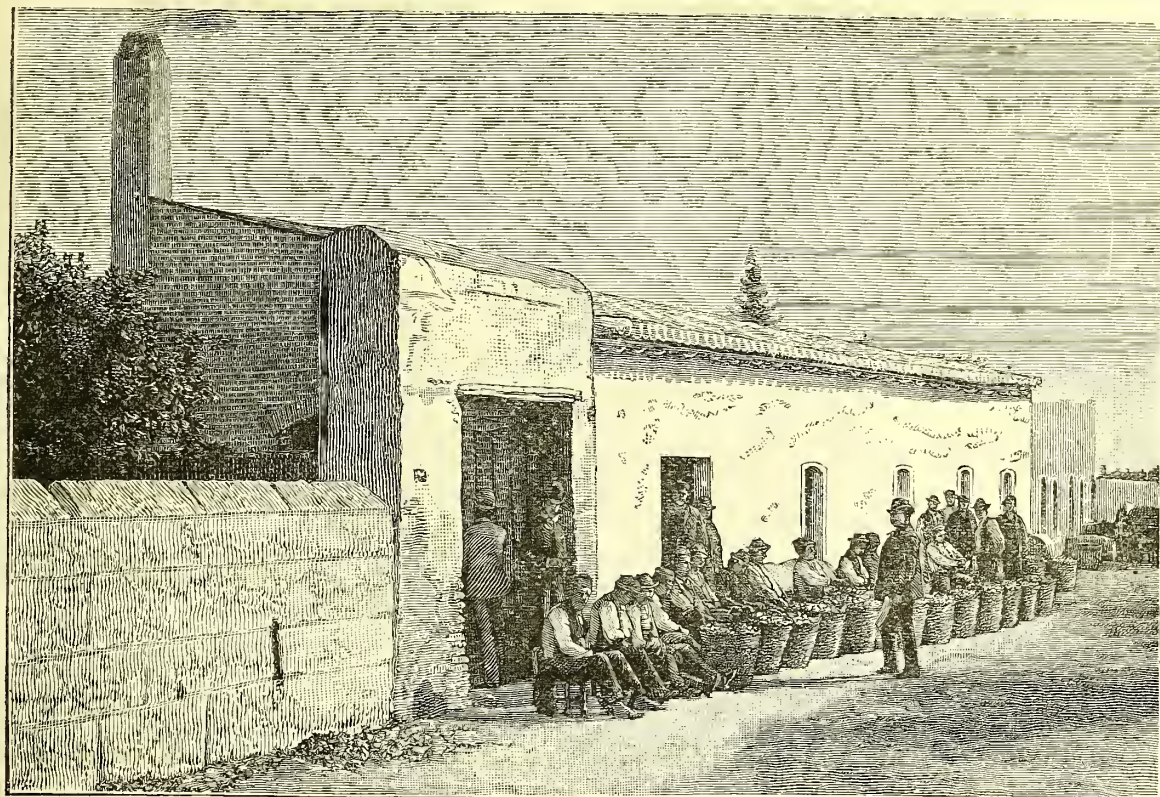
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FILTERING CLOTHS OF EVERY
DESCRIPTION.

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W. J. BUSH & CO.'S
ESSENCE OF LEMON FACTORY
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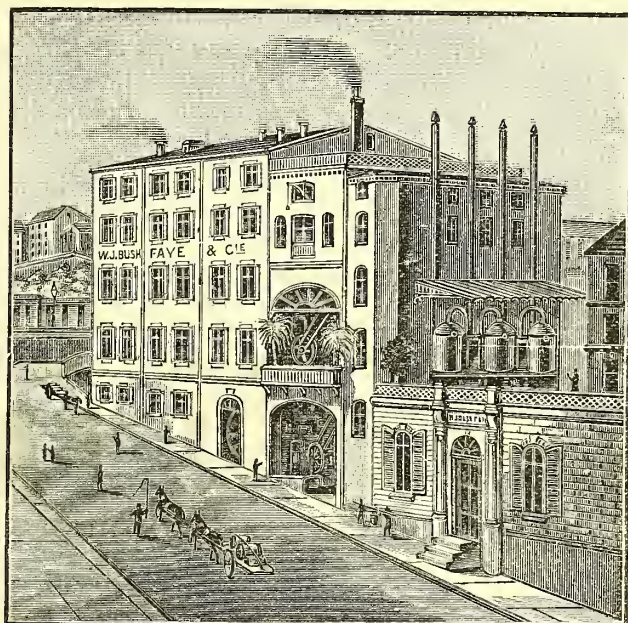
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ESTABLISHED 1749.



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W. J. BUSH, FAYE & CIE.

Distillers of Oils, Lavender, Thyme, Rosemary, and other French Essences'
GRASSE, ALPES MARITIMES, FRANCE.

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SODA WATER.
SELTZER WATER.
POTASH WATER.
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SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
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MANUFACTURER OF

Cases of every description for Home use and Exportation.

Wine Laths, Oak and Deal.

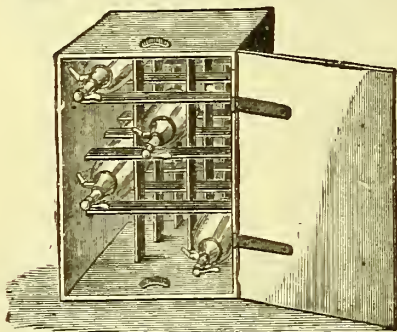
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"Acme" Incubator & Poultry Appliances.



PRICE LISTS FORWARDED ON APPLICATION.

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NATURAL ARSENICAL CHALYBEATE MINERAL WATERS

Levico

SOUTH TYROL

They are prescribed in the Treatment of SKIN DISEASES, MENSTRUAL DISORDERS, CHLOROSIS, ANÆMIA, SCROFULOUS DIATHESIS, SYPHILIS, and NERVOUS AFFECTIONS of all kinds.

Dose.—One tablespoonful three times a day, mixed with Coffee, &c.

Price per dozen Bottles, 12/ net.

" 100 " 86/ "

Delivered free on Rail London.

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24 COLEMAN STREET, LONDON, E.C.

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MARSHALL'S TWICE AWARDED
GOLD MEDALS

FAROLA

AND OTHER PREPARATIONS OF WHEAT.

These Wholesale Houses supply the Goods at List Prices.

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MAY, ROBERTS & CO., 9 Clerkenwell Road, E.C.
F. NEWBURY & SONS, 1 King Edward Street, E.C.
J. SANGER & SONS, 489 Oxford Street.
BUCKNALL & INGLETON, Bristol.
JOHN FOLLOCK, 12 Heslingden St., Manchester.
DOWNER, THOMPSON & CO., Belfast.

JAMES MARSHALL, 22 Pimlico Road, S.W.
22 Adelphi Terrace, Glasgow.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, NOV. 23, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that these may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 14 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and crossed MARTIN & Co.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1843, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£1,242.—LONDON, E.C.—Good Family Retail and Dispensing Business, with some good Proprietaries attached; returns average £1,242; net profits £450 to £500; well-fitted shop, and good stock; about £1,200 required.

2.—£500.—LONDON, N.—Profitable Retail and Dispensing; returns £500 yearly, at good prices; well-fitted shop, and good stock; rent £50 on lease; price £500, or offer.

3.—£700.—LONDON, S.W.—Good-class Dispensing and Retail; returns last year over £700; single-fronted, well-fitted shop, and good stock; vendor will sell at valuation if wished, or open to an offer.

4.—£1,200.—EASTERN COUNTIES.—General Retail and Mixed Business; established over 50 years; returns £1,200 yearly, with good profits; large shop, well fitted; good stock; about £850 required.

5.—£550.—SUFFOLK.—Unopposed good-class Retail and Dispensing Business; returns nearly £550; large double-fronted shop, and good stock; convenient house, good garden, &c.; about £500 required.

6.—£1,000.—DERBYSHIRE.—Fashionable town; Retail and Dispensing; all first-class trade; returns over £1,000; well-stocked shop, and good house; on lease; valuation only required.

7.—£700.—SUSSEX.—Attractive locality; First-class Country trade; returns last year nearly £700; single-fronted, well-fitted shop, and good stock; large house, rent £34; price about £600; reasonable offer considered.

8.—£600.—ISLE OF MAN.—Retail and Dispensing Business, very profitable; no cutting; returns nearly £600 yearly; expenses very low; price £400; no qualification necessary.

9.—£1,300.—WALES (SOUTH).—Very old-established Mixed Business; held by the late owner many years; returns £1,300 yearly; well-fitted shop, and good stock; about £850 required.

10.—£1,150.—WILTS.—Old-established Dispensing and Retail Business, with Wine Agency; situate in best position in good market town; returns about £1,150, very profitable; good house, and large garden, held on moderate rental; price to be arranged—about £1,000.

11.—£600.—SOUTH DEVON.—Attractive and much desired locality; old-established good-class Retail and Dispensing Business; returns over £600, with profits above the average; large handsome double-fronted shop, and good; about £600 required.

12.—£700.—STAFFORDSHIRE.—Main and Branch Business for disposal; Branch recently established; gross receipts £850; both businesses well stocked, and returns increasing; about £700 required.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,
VALUER, LEICESTER,

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*References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.***BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.****SURREY.**—Unopposed Retail, Dispensing, and Prescribing, with Wines and Spirits; returns £1,200; price £800.**MIDLANDS.**—Unopposed Village trade, 10,000 population within radius of two miles and no other Chemist; returns, all Light Retail, £300, and fast increasing; net profit £150; good house and garden, well stocked with fruit trees; very low rent; illness sole cause of sale; price £275.**MANCHESTER SUBURB.**—Good-class Light Retail, returning £700, nearly one-half profit; good corner and excellent house; price £500.**LIVERPOOL.**—Genuine old-established Light Retail for sale in consequence of continued illness; returns £600; price £300; should be seen at once.**STOCKS.**—Parties desirous of selling their stocks and fixtures in one lot for cash should apply to F. J. Brett.**THOS. TOMLINSON & SON,**
CHEMISTS AND DRUGGISTS' VALUERS,

9 New Cannon St., MANCHESTER,

Have the most experienced Practice in the Profession.

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STOCKTAKING OR OTHERWISE.****BUSINESSES FOR DISPOSAL.**

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FOR SALE, an old-established and purely Retail and Dispensing Business, in one of the most popular suburbs of Sheffield. Apply, in first instance, to Mr. G. T. Newsholme, Pharmaceutical Chemist, Sheffield.**DENTAL Practice;** old; takings £350; 10 rooms; rent £22; 350 000; £50. Complete for £100, including £20 chair, £29 vulcanizer, £12 lathes, furniture, instruments, shop tools, and fixtures; bargain. Tatham, 12 Bond Street, Hull.**SURGICAL Instrument Business** for disposal, holding appointments to hospital, &c.; about £300 wanted; principal ordered abroad on account of health. Address "Surgical," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**FOR immediate disposal,** a Dispensing and Family Business within 6 miles from Liverpool, making £13 to £15 per week, and capable of improvement; good house; rent £60. For further particulars apply to F. G. H., care of Evans, Sons & Co., Liverpool.**THE only Chemist and Druggist's Business** in Low Moor and populous districts; good profits; prescribing and tooth extraction; established over 50 years; best shop in neighbourhood; good house (can be sold). Inquire of Humphries & Co., Wholesale Druggists, Bradford.**SOUTH Wales.**—In market town, a thriving Dispensing, Wholesale, and General Business; returns £1,100; splendid stock; trade steadily improving; rent £30; price £600 or valuation; satisfactory reasons for disposal. Full particulars from "Silurian," care of Barron, Harveys & Co., Giltspur Street, E.C.**UNOPPOSED Business,** in large increasing village in Midlands; population 3,000, with villages round total 5,000; rent £18, lease; good house, large garden; returns £310, increasing; net profit £155; ill-health cause of sale; price £275. "Fides," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**CHEMIST and Druggist Business** to be sold; splendid position in densely populated locality; capital house, which could be let off; shop with modern fittings; first-rate opening for an energetic man; rent £40; price £200, to include stock and all fixtures. Apply to Mr. Alfred Richards, Auctioneer and Estate Agent, Tottenham.**DEATH VACANCY.**—For immediate disposal, a Light Retail, Dispensing, and Prescribing Business in the South-West of England; returns average last 3 years £800; net profit over £300; shop and 9 rooms; all hooks open for inspection; price £500 or valuation. "Executrix," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**EASTERN COUNTIES.**—A very old-established Retail, Dispensing, and Prescribing Business; returning £1,100, with good profits; low rent; 10-roomed house, and quarter acre of garden stocked with fruit trees; satisfactory reasons for selling; price £600, or reasonable offer entertained. B. R., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**MR. SYDNEY GREENWOOD,***Chemists and Druggists' Transfer Agent, Valuer to the
Drug and Allied Trades,***PITTVILLE HOUSE, Lea Bridge Rd., CLAPTON, N.E.**

No.	Locality.	Returns.	Rent.	Price.
1.	LONDON, E.C.	£1,500	£120	£975.
2.	LONDON, E.C.	£750	£75	£450.
3.	LONDON, W.	£1,000	£55	£500.
4.	LONDON, N.	£500	£50	£400.
5.	ESSEX COAST	£350	£31	£300.
6.	KENT COAST	£1,500	£50	£600.
7.	STAFFORDSHIRE	£1,000	£40	Valuation.
8.	BERKSHIRE	£430	£45	£315.
9.	LINCOLNSHIRE	£1,000	£55	£800.
10.	HANTS	£1,000	£50	£375.

VALUATIONS

A Speciality. Write to Mr. SYDNEY GREENWOOD (as above), who will give the matter his prompt attention.

BUSINESSES FOR DISPOSAL—Continued.**A WHOLESALE Druggist,** going abroad in consequence of failing health, would dispose of his Business for £800, with stock at valuation; valuable connection in a few Northern and Midland counties. Address, "Druggist," care of Rudolph Mosse, Advertising Agent, Queen Victoria Street, London.**FOR sale,** the old-established Family and Dispensing Chemist's and Mineral Water Business at Selby, in Yorks, successfully carried on for 40 years by Messrs. Cutting & Son, with the freehold of the premises; the shop is well fitted, and the mineral-water plant partly new. For terms, &c., apply to Union Bank, Easingwold.**BUSINESSES WANTED.**

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, small Business, payable by instalments, deposit given, by energetic man; thanks for offers. W., 113 Riversdale Road, Highbury, N.**WANTED,** a sound Business; must bear thorough investigation and show net profit of £250 to £300 per annum at least. Particulars to F. Lawson Lewis, Esq., Solicitor, Eastbourne.**GENUINE Business** required in market town; South Midlands preferred; must be fair home and business capable of increase; cash ready; no Agents. Full particulars, in confidence, to A. P. S., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**WANTED,** a good Retail and Dispensing Business in a large town (seaport preferred); returns from £1,000 to £1,500. Address, with every particular as regards net profits, length of lease, rent, &c., to W. Martin, Pharmaceutical Chemist, Castle Street, Launceston, Cornwall.**SALES BY TENDER.**

3s. 6d. for fifty words; 6d. for every 10 words beyond.

F. J. BRETT is instructed to Sell by Tender, by Mr. J. W. B. Beman, 53 Great George Street, Leeds (who is going abroad), on Thursday, December 5th, the old-established Light Retail, Dispensing, and Prescribing Business, together with the Proprietary Articles belonging thereto, in one lot as a going concern; the shop is well stocked and fitted, and in good position; in consequence of severe illness the Vendor has not been able to give it the necessary personal attention desirable, but to an energetic man there is ample scope for doing a large and profitable trade. For Tender forms and further particulars apply to F. J. Brett, Trade Valuer and Transfer Agent, 60 St. Stephen's Road, Leicester.

3 THE GRAND PARADE, EAST PUTNEY, S.W.

MR. SYDNEY GREENWOOD has been instructed to Sell by Tender, in one lot, as a going concern, the Fixtures, Fittings, Utensils, and Stock-in-Trade of a newly-fitted Chemist's Shop situate as above, on account of owner having unexpectedly accepted appointment; good residential locality; bath, hot and cold service; near two stations; offers rare chance for any young man about to start in business for acquiring a really good opening for business; tastefully fitted and well stocked at a moderate figure. Tenders will be received by Mr. Sydney Greenwood, Chemists' Valuer and Transfer Agent, at Pittville House, Lea Bridge Road, Upper Clapton, County of London, up to November 27th, 1889, and of whom full particulars, and printed forms for making Tenders, can be had on application.

FOR SALE.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

FOR Immediate Sale, entire Fittings, Mahogany Counters, Glass Cases, Drawers, Show Jars, Utensils, &c., of a first-class Branch Shop; cost over £200; price £75; inspection invited. W. T. Cole & Son, Weymouth.

ENTIRE new Fittings of Chemist's shop, fixed complete, within 100 miles of London, for £50, consisting of mahogany drawers, shelvings, cornices, lockers, cover-boards, wall-case, dispensing-screen and counter, serving-counter, desk and case, window enclosure, &c.; drawing on application; any part of above at very low prices; large quantity of second-hand fittings cheap; 24 6-oz. second-hand bottles. Elkanah Nattai, 207 Old Street, near County Court.

FOR SALE, handsome Dispensing Screen, 7 ft. long, new design, £7; heat-front brush case, 25s.; pair specie jars, 30s.; 12 ft. range, mahogany-fronted drawers, glass labels, £9; 12 ft. range polished pine ditto, stained mahogany, gold labels and glass knobs, £6 12s.; mahogany case and desk, 55s.; sloping plate-glass case, 36 by 18. 35s.; nest 46 mahogany drawers, with cupboards under, second-hand, 70s.; 180 gold-labelled rounds, jars, and syrup bottles, new, gold labelled, £9; 12 ft. mahogany-top counter, pitch pine front, second-hand, £4 10s.; four 4-gallon carboys, 10s. each; three 8-gallon ditto, second-hand, with out stoppers, 15s. each. R. Tomlinson & Sons, Medical Fitters, Bond Street, Constitution Hill, Birmingham.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

INVOICE Clerk required by a firm of Wholesale Druggists. Apply, by letter, to H. C., care of Dawson's, Cannon Street.

WANTED for 1st of January, 1889, a good English Correspondent for my Chemical Works and Wholesale Drug Business. J. D. Bieber, Hamburg.

PARIS.—Wanted, a thoroughly competent Dispenser, speaking French fluently. Apply personally or by letter (with photo) to Mr. Weston, Chemist, Westbourne Terrace.

ASSISTANT, with Minor qualification; must have an accurate Dispenser, and used to good-class London trade. Apply to Shirley & Son, 2 Westbourne Grove, Bayswater, W.

WANTED, a competent Assistant to take charge of a branch shop; light retail; no heavy trade. Send full particulars, enclosing cartes, to Owles & Son, Pharmaceutical Chemist, 9 Hall Quay, Gt. Yarmouth.

WANTED, Traveller, with good country connection among Chemists and Druggists, to represent first-class Brush firm, on commission. Address, J. W. S., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DRUG Trade.—Wanted, an experienced Bottle Washer; also an Assistant Packer and Bottle Washer. Address, stating experience and salary required, "Bottles," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

INDOOR Assistant; competent to take charge; used to Country Retail, and be able to dispense. Apply, with photo (to be returned), giving references, age, salary expected, &c., to C. Messrs. Hearon, Squire, Coleman Street, London, E.C.

SURGEON'S Dispenser for beginning of December, not over 25; rooms found, with coals and gas; must be thoroughly trustworthy, well recommended, and had good experience. Apply to W., Flood & Co., 102 Blackman Street, Borough, S.E.

CHEMIST'S Assistant, experienced Counter hand, wanted; accustomed to quick ready-money trade preferred; good address indispensable. State age, salary, references, and enclose photo to Mr. W. Inman, 8 Shandwick Place, Edinburgh.

WANTED, a good Assistant for a country trade, in a small Wholesale and Agricultural business; one preferred who has been used to Travelling occasionally; qualification not necessary; easy hours; exceptional terms to a suitable party. H. H., 93 High Street, Rye.

COMPETENT Assistant required, a good worker and obliging to customers, in a busy suburban neighbourhood; hours 8 to 2 and 5 to 10, or by arrangement; outdoors; qualified preferred. Give full particulars, including age and salary required, to 292, care of Messrs. Wright, Layman & Umney, Southwark Street.

COMPETENT Pharmacist and Accountant wanted in a large Wholesale house, doing an increasing business; age should not exceed 25 years; must be accurate in figures, able to take entire charge of cost book, and be experienced in purchase of drugs; a permanent position for a first-rate man. Address by letter, stating age, salary, experience, and qualifications, to S. K. & Co., care of Crossley, Moir & Co., Advertising Agents, 57½ Coleman Street, E.C.

WANTED, an outdoor Assistant; thorough dispenser and used to good-class retail. Raimes & Co., York.

INDOORS.—Energetic Assistant wanted; accustomed to cash trade; liberal salary to suitable man. Address, Frost, Beeston, Notts.

ACTIVE Junior (indoors); Light Retail; hours easy, Wednesdays 4, no Sundays. Full particulars, salary, and references, with photo, to Gibson, Post Office, London Street, Reading.

PERMANENCY.—Wanted, single indoor Assistant, light country Business near London, good locality, comfortable home, porter kept. Photograph and salary required, with particulars of experience, to Mr. Smith, care of Messrs. Herrings & Co, 40 Aldersgate Street, London.

APPRENTICESHIP.

APPRENTICE.—Intelligent youth wanted; indoors; premium £40 for 4 years. Apply, W. O. Smith, Agricultural and Family Chemist and Steam Soda-Water Maker, Titchfield, Hants.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR (20); good-class Dispensing and Retail; 5 ft. 9 in. Stokes, 107 Albert Road, N.E.

TEMPORARY or Branch Manager; 15 years' varied experience. "Chemist," 3 Upper Street, N.

AS Assistant; qualified; aged 26; excellent experience. "Minor," 38 Paulton Square, Chelsea.

AS Dispenser; Minor and Apothecaries' Hall; disengaged. Turner, 12 Monneroy Road, N.

MANAGER or Senior; outdoor preferred. Particulars of "Chemist," Trinity Square, Llandudno.

ASSISTANT; mixed country business. H. S., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER; temporary or permanent; experienced. Address, "Chemist," 119 Oldham Road, Rochdale.

ASSISTANT or Manager; good experience; disengaged in January. "Tincture," 50 Parchment Street, Winchester.

MANAGER or Assistant; temporary or otherwise; in or outdoors; qualified. L., Mr. Morgan, Chemist, Harford.

JUNIOR Assistant; 4 years' experience; Birmingham or neighbourhood. "Medicus," 94 Oldbury Road, Smethwick.

CHEMIST.—As Junior Assistant in Manchester or neighbourhood. A. C. R., 137 Chorlton Road, Manchester.

OUTDOORS; aged 28; any capacity; energetic; experienced. "Chemist," 21 Clarence Street, Liverpool.

ASSISTANT or Branch Manager (qualified); can Prescribe and Extract Teeth; aged 27. "Minor," 6 Oastle Street, Hastings.

JUNIOR; qualified; aged 22; tall; good references; City experience; disengaged next Tuesday. "Ozone," 225 New North Road, N.

AS Junior; wanted, a situation at once; 4½ years' experience; good references. Address, stating terms, Thorne, Market Drayton.

AS Chemist's Assistant or Surgeon's Dispenser; aged 30; Prescriber, Dentist; good references and experience. "Vigilans," Blake's Hotel, Andover.

QUALIFIED Student seeks afternoon or evening engagement in Business or Dispensary; experience. C. G. Willsher, 17 Bloomsbury Square, W.C.

ADVERTISER (28), 6 feet, unqualified, married, sine encumbrance, thoroughly experienced and useful, seeks suitable berth. W. Membury, Yeovil.

AS Junior, in good Dispensing business; 3½ years' experience; aged 19½; height 5 ft. 10 in.; South or Midlands preferred. H. S., care of Niblett & Co., Stroud.

ASSISTANT or Branch Manager; aged 26; 5 ft. 7 in.; 11 years' London and country experience; disengaged. Owen H. Bott, 86 High Street, Leicester.

MANAGER or Senior; married; accustomed to good-class trade; excellent testimonials; qualified "Melita," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CLERK; young German; aged 22; acquainted with the French and English languages; good references. Hermann Rehlen, care of Bassermann & Herrschel, Wholesale Druggists, Mannheim, Germany.

JUNIOR or Improver; 21; 4 years' experience. J. Saunders, 231 High Street, Sheerness.

ASSISTANT; aged 23; 5½ years' experience; West-End preferred. W. J., care of Edwards, Conway.

ASSISTANT; aged 28; experienced; height 5 ft. 7 in. "Chemists," Smithfield, Manordillo, South Wales.

ASSISTANT, temporary or permanent; aged 29; qualified. "Chemist," Schoolhouse, Tealby, Market Rasen.

ASSISTANT (outdoor); 9 years' experience; disengaged December 8. A. A., care of Fox, Chemist, Great Malvern.

ASSISTANT; aged 23; 5½ years' London experience; outdoors preferred. I. Freeman, 26 Osborne Road, Finsbury Park, N.

ASSISTANT; employment wanted. Wholesale; 7 years' trade experience; good reference. D., 10 Bookham Street, Hoxton, N.

MANAGER (outdoor); aged 43; qualified; good references; varied experience; married; abstainer. G., Mr. Davis, Chemist, Park Lane, Leeds.

LOCUM-TENENS, Temporary Branch Manager, or Assistant; Minor; aged 28; abstainer. Davies, 2 Hale Bank, St. Matthew's Road, Bristol.

MANAGER, Senior, or Dispenser; qualified; married, no family; aged 31; excellent testimonials and references. Green, Isham, Wellingborough.

ASSISTANT in a good-class Business, or Dispenser to a Surgeon; aged 25; good references and experience. "Alpha," 123 King's Road, Reading.

WHOLESALE DRUGGISTS.—Wanted by an experienced Assistant, employment at Wet Counter or Dry; good references. Address, B. C., 122 Walworth Road, S.E.

WANTED, position as Manager or Senior Assistant in a first-class house in South Africa or the Colonies; disengaged; first-class references; over 10 years' experience; aged 26 years. A. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A YOUNG Scotch Chemist (in business), having delicate sister, desires change of climate for winter and spring months; mild climate necessary; would take charge of business or fill position of trust; references exchanged. Address "Scot," Hatrick & Co., Rinfild Street, Glasgow.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

DENTISTRY.—First-class Mechanical work undertaken for the Profession at moderate terms; good West-end references as to ability, &c.; punctuality guaranteed. W. E. Hill, 220 High Holborn, W.C.

CHEMISTS and Druggists who are issuing Price Lists for 1890 are requested to send specimen and best rates for Advertisements to Hamilton & Co., Disinfectant Manufacturers, Wandsworth, London, S.W.

ARTIFICIAL TEETH-MAKING.—To Chemists in suburbs and country wishing to combine Artificial Teeth-making with their business; *no expense*; will pay well. Address in first instance, E. D., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BOXES.—LIGHT WOOD BOXES for Chemists and Druggists, for Packing all kinds of articles for sending by post or rail. Cheapest, Strongest, Lightest, and Best. Samples Free, 6 stamps. Write for samples, stating sizes required, inside measure, to Casbon's Joinery and Box Works, Peterborough.

FOR want of Capital, the Advertiser will sell the sole right of a most invaluable Patent Medicine, registered (a certain and permanent cure for Fistula); price £50, including a large stock of Circulars and Printed Matter, Trade Mark, Blocks, Engravings, Boxes, &c.; a fortune may be made if well advertised. Address, in first instance, to "Veritas," Lettis' Library, Crouch Hill, London, N.

OFFERS wanted for 100 Lamplough's, £3 10s. paid. 45/50, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s. 6d., post free.

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PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. **MINOR**.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

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MESSRS. BAILLY & COATES prepare Candidates for Matriculation, and the Preliminary Examinations at Apothecaries' Hall and College of Preceptors; careful preparation in Theoretical and Practical Chemistry, Physics, Botany, Materia Medica, and Practical Pharmacy for professional examinations; Laboratory fitted with every requisite. Preliminary Medical School, 30-32 Ludgate Hill, London, E.C.

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First Quality, 9d. per lb., by using

Rouse's Concentrated Cucumber Paste.

In Jars (free), ½ lb. 2s. 3d.; 1 lb. 4s. 3d. net. Making 3 lbs. and 6 lbs., costing ½d. per oz., by simply adding Water and Glycerine.

Thro' any Wholesale House, or post free for P.O.

ROUSE & CO., 12 WIGMORE ST., LONDON W.

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Which all Chemists ought to have and to read as faithfully as their British Pharmacopoeia, viz,

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"**HANDY BOOK OF MEDICINE STAMP DUTY**"

(Price 2/6, by post 2/9), and

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Published at the Offices of "The Chemist and Druggist," LONDON AND MELBOURNE.

May be obtained from most Wholesale Houses, who invoice the Books at the published prices.

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, exchange column &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

OFFICES: 42 CANNON STREET, LONDON, E.C.

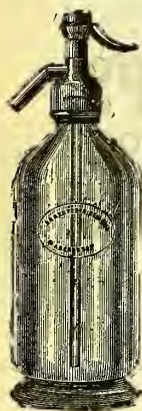
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New York
Sydney
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BOXES BOTTLES, MACHINERY,
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*Catalogues, Circulars, Testimonials
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GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED



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MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

3 HIGHEST AWARDS POSSIBLE

A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
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Aerated Water Engineers and Glass Bottle Manufacturers,

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Indian, Havannah and British Cigars, Tobaccos and Cigarettes, at the lowest Wholesale Prices.

BEWLAY & CO. (LIM.), TOBACCO MANUFACTURERS AND CIGAR IMPORTERS, **49 STRAND, LONDON.**
ESTABLISHED OVER 100 YEARS.

WILKINSON'S COMPRESSED Best Hops compressed into small parcels of one pound and half-pound, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

Samples and Prices sent on application to

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P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Dealers in every description of Isinglass.

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Parfumeur PARIS
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NEW PERFUMES:

ESSENCE MELILA
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ROYAL THRIDACE SOAP.

VELOUTINE SOAP.

Besides all leading and staple odors.

The Violet Toilet Soaps, Perfumery, and Toilet Requisites are the leading brands through Europe. They are undoubtedly the finest and highest grade goods made.

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IN THE "LANCET" OF NOVEMBER 11, 1865:
BARON LIEBIG SAYS:—

"Were it possible to furnish the market at a reasonable price with a preparation of meat, combining in itself the albuminous together with the extractive principles, such a preparation would have to be preferred to the Extractum Carnis, for it would contain all the nutritive constituents of meat." Again—"I have before stated that in preparing the Extract of Meat, the Albuminous principles remain in the residue, they are lost to nutrition, and this is certainly a great disadvantage."

"BOVRIL" contains the albumin and fibrine in the most perfect possible form, and to those who know the requirements of the human system and the constituents of food, it will be apparent that this albumen and fibrine is identical with what the body requires for recuperation, and that as a perfect form of concentrated nourishment it must supersede any animal aliment at present known.

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To H.R.H. The Prince of Wales, The Empress of Germany, &c.

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PEPTONES
OF
BEEF,
MUTTON,
VEAL,
AND
CHICKEN.

BRAND & CO'S.
SPECIALTIES FOR INVALIDS.
CONCENTRATED
BEEF TEA, VEAL,
MUTTON & CHICKEN BROTHS;
TURTLE SOUP & JELLY, CALF'S FOOT,
JELLY, MEAT LOZENGES
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ESSENCES
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LIFE'S RESTORER. MAGGI

FINEST CONSOMMÉ.

LIQUID EXTRACT OF FINEST FRESH BEEF.

AT PARIS EXHIBITION, 1889,

MESSRS. J. MAGGI & CO. WERE DECLARED ABOVE COMPETITION,

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A happy thought does not alone constitute a perfect invention; simplicity is needed to make it perfect.

"MAGGI" possesses this quality in a degree that renders it as indispensable in the kitchen as salt and pepper.

"MAGGI" is simply liquid EXTRACT OF BEEF, a teaspoonful of which, added to a cup of hot or cold water, makes at once a perfect BEEF TEA, which anyone, sick or well, will relish.

Two tablespoonfuls to a quart of water (adding Vegetables, &c.) will make a better Soup or Potage than hours spent over the fire.

The improvement in the quality of Gravies, Ragoûts, Stews, Hashes, Roasts, &c., by the addition of a few drops of "MAGGI," is amazing.

Unlike all other Extracts of Meat, "MAGGI" is most delicious, does not need the addition of salt and pepper, can be used by the most inexperienced, produces as good a Consommé or perfect Clear Soup as any first-class cook can prepare by the most elaborate and expensive means, and keeps good in any climate.

Soup Stock is now rendered unnecessary, as "MAGGI" is better, cheaper, and more nutritious for the sick, convalescent, and healthy.

In 2-oz., 1-lb., & 2-lb. Bottles, of all Grocers & Druggists throughout the world.

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Fry's Pure Cocoa



To secure this article
ask for
FRY'S PURE
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SOLE MAKERS



PEPTONATE OF IRON
DENAEVERS PEPTONES CO. LTD.
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PEPTONE OF MEAT

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LIQUID PEPTONES STERILIZED

Free from microbes!
Keep good for ever in all climates.
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DENAEVER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitution, children, and aged people.

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Of all Chemists and Wholesale Houses.

QUARTER & HALF POUND TINS
OF
"ROYAL CHARTER" AND "UPPER CRUST"
TOBACCO

Make most Suitable Presents for Coming Season.

SOLE MANUFACTURERS—

M. & R. PEACOCK, Kingsland Road, London, N.E.

Write for Particulars and Prices, stating what quantity likely to be wanted.

THE KAISER'S COCOA.

MEAT. PEPTONE. COCOA.

This Preparation of Cocoa and Peptonised Meat Extract forms one of the most powerful concentrated foods known; it is indispensable to invalids, a boon to the healthy, and to those of a weak digestion. From its richness in nitrogenous principles (21 per cent.), it contains all the elements of tissue muscle, and blood formation, in a form ready to be assimilated at once, being predigested. In Powder for Breakfast, &c., or in Tablets.

As taken by the late EMPEROR FREDERICK on the recommendation of Dr. Leyden.

PERFECT FLAVOUR. NO OBJECTIONABLE TASTE. EASILY DIGESTED.

Price 1s. 6d. per Tin. "The article is in every way of satisfactory quality."—*British Medical Journal*. Price 1s. 6d. per Tin

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"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and $\frac{1}{4}$, $\frac{1}{2}$, 1 lb. Tins only.



TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS,

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Write for List of Specialities.



**ROBINSON'S
LIEBIG'S BEEF WINE.**

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skillful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).

December 15, 1888.

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Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cask containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

BRAGG'S

Sold in Powder, 2/-, 4/-, and 6/- bottles; also in Biscuits, 1/-, 2/-, and 4/- tins (Children like these), and in Lozenges, 1/1½ tins (portable and convenient).

Undoubtedly the most natural preventative and curative agent in all cases of Indigestion, Disorders of the Liver, Fevers, Cholera, Dysentery, &c.
The trade cannot do better than keep these old-established and safe preparations under the notice of their customers.

VEGETABLE CHARCOAL.



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PASCALL'S GOLDEN MALTEX

PATENTED.

Contains 25% of Allen & Hanburys' Extract of Malt.
A NOVEL CONFECTION. — MOST SALEABLE.
Delicious Flavour. Brilliant and Attractive Appearance.
SELLS AT SIGHT.

Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.

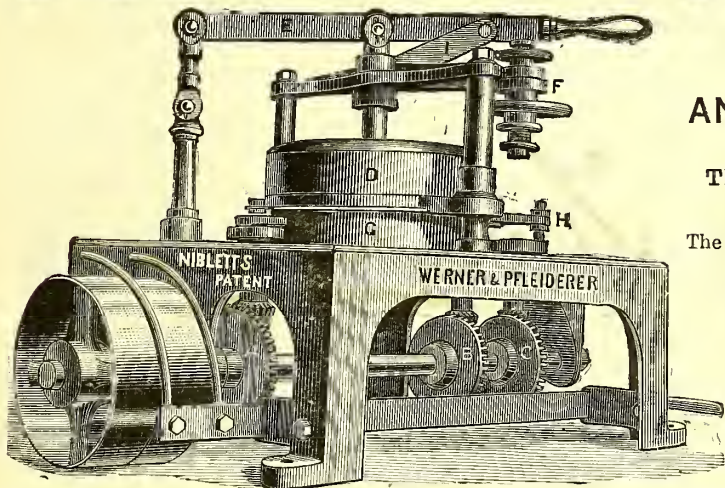
1/ Bottles, 9/ per doz.; 1-lb. Bottles, 21/ per doz.; and in 4-lb. Jars, 1/6 per lb.

HANDBILLS POST FREE ON APPLICATION.

OF ALL WHOLESALE HOUSES, OR OF THE MANUFACTURER,

JAS. PASCALL, BLACKFRIARS ROAD, LONDON, S.E.

WERNER & PFLEIDERER'S PILL-MAKING MACHINERY.



PILL ROUNDING AND FINISHING MACHINE

(NIBLETT'S PATENT).

**THE ONLY PERFECT MACHINE
FOR THIS OPERATION.**

The Pill Plate takes ¼ lb. of Pills at once, and these are rounded in less than one minute. Can be worked either by hand or power. Used most satisfactorily by some of the best firms in the trade.

WRITE FOR PRICE AND PARTICULARS.

The "UNIVERSAL"
KNEADING & MIXING MACHINE
FOR PILL MASS MAKING.

Also for Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for General Mixing and Incorporating.

PIPING PRESSES, PILL CUTTERS, PILL COATERS.

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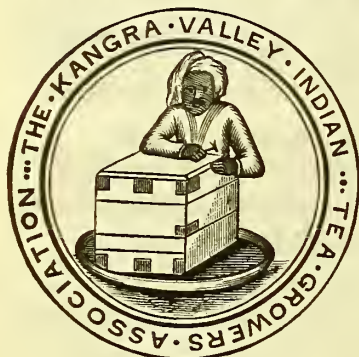
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CEYLON TEA.

FRAGRANT AS THE FLOWERS OF SPRING:
Packed in Tins or Lead Packets. Most Attractive Packages.
 In $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Boxes, to sell Retail at 2/-, 2/6, and 3/- per lb. Set of three $\frac{1}{4}$ -lb. samples post free for 2/- in stamps.

SEND TRADE CARD FOR PRICE LIST AND TERMS TO

CAVE, JOHNSON & CO., WHOLESALE TEA AND COFFEE DEALERS, 8 LIME ST., LONDON, E.C.



TRADE MARK.

KANGRA VALLEY INDIAN TEA GROWERS' ASSOCIATION.

French & Langdale, 14 St. Dunstan's Hill, London, E.C.

Guaranteed to be Absolutely Pure, as supplied to Europeans in India.

Packed in 1-lb., $\frac{1}{2}$ -lb., and $\frac{1}{4}$ -lb. Metallic Air-tight Packets.

No. 1, Orange Pekoe, at 4/ per lb. No. 2, Pekoe, at 3/ per lb. No. 3, Pekoe
 Souchong, at 2/6 per lb. No. 4, Souchong, at 2/ per lb.

Export Prices in Bond, 6d. per lb. less than above, in Chests of 50 lbs. and upwards, shipped free of charge. 50 lbs. Carriage Paid. No Travellers employed. Wholesale Terms and Tasting Samples on application.

These Teas are recommended to Chemists not only on account of their Purity, but because they are Less Astringent than other Indian Teas.

TOWER TEA

A MOST VALUABLE AGENCY.

REGISTERED.



Tower Tea

NOTE. These Trade Marks appear on every Package.

WHERE VACANCIES EXIST, AGENTS ARE APPOINTED BY

THE GREAT TOWER STREET TEA CO., LIM.,
 5 JEWRY STREET, LONDON, E.C.

A WONDERFUL SUCCESS!!**NON-INTOXICATING BEER**

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.
ENLARGEMENT OF SIZE.A Sixpenny Bottle makes EIGHT GALLONS of
HERB or BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

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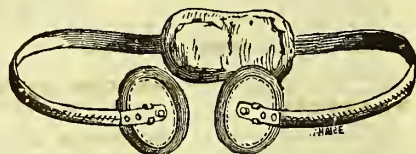
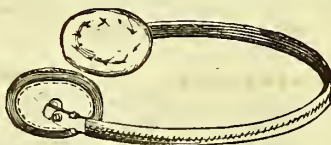
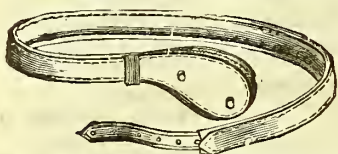
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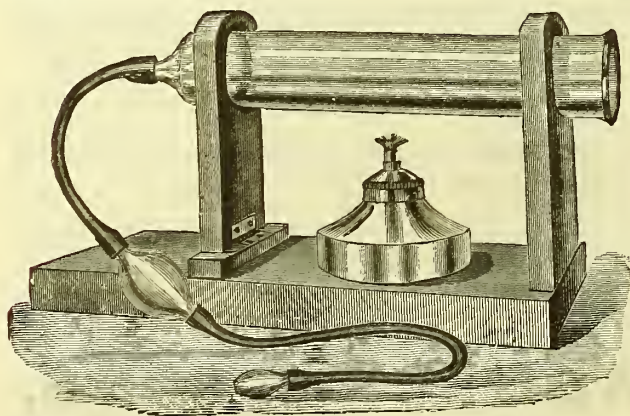
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The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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POST-CARD COMPETITIONS.

WE have been asked to reopen these competitions, which some time ago furnished some useful and interesting suggestions. We think the time is opportune, therefore, by this means to ask for assistance and advice on behalf of our old friend Mr. Blank, chemist and druggist, of Dulltown, who wants to know what is

THE BEST CHRISTMAS SUGGESTION

for his adoption. Shall he send out, as a gift to his customers, a pretty calendar, a household almanac, a chromolithograph, a sachet, an elegant Christmas card, or what? He wants the suggestion, whatever it may be, to be as definite as possible: that is to say, if it is to be a card, he would like to have the design; if it is to be something perfumed, he wants to know how it is to be done. He wants the thing to look nice, but at the same time not to cost too much; or, putting this the other way about, he wants to do the business as cheaply as he can without looking mean. With this explanation, we ask subscribers, their families, or their employés to help by sending us their designs or sug-

gestions during the current month. Such must be sent in on post-cards; and November 30 will be the latest date we can receive cards in competition. The cards must be addressed to "The Editor of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.," and correspondents are reminded that if they write anything else on the address side (as, for instance, "post-card competition") surplus postage will be asked, and the cards will be rejected. We shall give one guinea for the best design or suggestion sent in; and if we get a sufficient response we will with pleasure add another guinea for second or second and third places.

Foreign and Colonial.

COLLECTING MATICO.—Dr. Rusby, writing in the *Druggists' Bulletin* on the collection of matico, observes that although the drug occurs in commerce with an abundance of leafy tops, such tops are a mere accident of collection, and do not constitute the drug proper. In collecting the leaves the plants are cut down, and one of the long slender branchlets being held at the base with the left hand, it is stripped by slipping the right hand tightly along it from below upward. As its joints are quite feebly attached to one another the very tender top ordinarily comes away with the last leaves. The leaves dry very rapidly in the sun, being ordinarily placed for this purpose upon the coca floor, they being chiefly collected in the important coca-producing regions of Bolivia and Peru. Sometimes they are pressed into bales in the coca-presses, sometimes with the feet alone. Hence the flake-like masses in which they commonly occur.

ORCHELLA WEED may be ranked among the principal articles of trade in Zanzibar. The small-leaved orchella, called malelle majani, or malelle urima, by the natives, is the variety most in esteem. It is found in immense quantities along the shore southwards from Kismayu down to Mozambique, almost completely covering the low shrubs along the littoral. This accounts for the large admixture of wood and dried leaves belonging to other plants with which the orchella is usually brought to the market, and which is not caused by any wilful adulteration, but purely because the weed, thrown up by the sea, remains hanging in the branches in such quantities as to kill the plants. This orchella is cleaned and repacked in Zanzibar, the foreign matter in it averaging from 20 to 30 per cent. The coarse orchella, known in the native language as malelle uene, or malellaja Brawa, is found northwards of Kismayu as far as Socotra.

CHEMICAL PRIZES IN FRANCE.—The French Society for the Encouragement of National Industry annually offer a large number of prizes for discoveries and researches connected with the industries, and for excellence in art work. Among the prizes which it has been decided to award for chemical subjects during the coming year are the following:—2,000 francs for the industrial preparation and application of ozone, 1,000 francs for the best process of utilisation of residual products, 1,000 francs for the most useful new application of a simple non-metallic body, 1,000 francs for the discovery of a new alloy practically useful in the arts, 4,000 francs for the discovery of the synthetic manufacture of organic bodies such as quinine, cane sugar, &c., 2,000 francs for the discovery of practically useful new tannin, 2,000 francs for a body which will replace the use of sulphuric acid in dyeing, especially in silk dyeing, two prizes of 1,000 francs and 2,000 francs respectively for the industrial manufacture, in France, of anhydrous and fuming sulphuric acid, one of 2,000 francs for improvements in the manufacture of chlorine, 3,000 francs for the manufacture of glass vessels for use in chemical operations, 2,000 francs for the manufacturer of sulphuric acid who shall be the first to bring into commerce sulphuric acid, manufactured from pyrites, which shall be perfectly free from arsenic, and 4,000 francs for the most practically useful paper on chemistry or metallurgy. There are also several special prizes, one of which, of 800 francs, will be awarded every year to the workman who has been for the longest period in the employ of a single firm. The fund for this prize was contributed, at the initiative of M. Fourcade, by the exhibitors in class 47 of the Universal Exhibition of 1878.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

A MIXTURE of two salts will again form the subject of the exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination, the constituents of the mixture are to be detected, and all other substances proved absent. Students' reports should contain a concise account of the work done, and should include a list of the constituents detected, distinguishing any which may be regarded as accidental impurities.

Students' applications for portions of the mixture will be received up to the morning of next Wednesday, November 27, and the samples will be forwarded immediately.

Students' reports will be received up to Wednesday, December 11.

REPORTS.

The mixture distributed for analysis last month consisted of 7 parts of lead acetate and 1 part of bismuth subnitrate. The calculated composition of 100 parts of this mixture is:—

Bi..	..	..	..	..	..	858
Pb	..	..	..	..	..	47.79
NO ₃	..	..	..	..	..	2.53
C ₂ H ₃ O ₂	..	..	..	..	..	27.24
O	..	..	..	..	..	.65
H ₂ O	..	..	..	..	..	1321
						100.00

Thirty-three students sent in reports, and out of that number twenty-four failed to detect the nitric radicle, and twenty-one failed to detect bismuth. The other two more important constituents of the mixture were detected by all our correspondents, with one exception.

In the ordinary course of the preliminary examination of this mixture the student might very easily have failed to notice anything that would suggest the presence of bismuth or of a nitrate. On igniting the powder with sodium carbonate on charcoal a bead was obtained, which showed all the characters of lead. The incrustation was not precisely such as a pure lead salt would give, but it was so like a lead incrustation that it was excusable to accept it as such. When the powder was treated with water part of it remained undissolved. In some of the most accurate analysis this insoluble portion was separated and analysed separately. This was the most troublesome course, but it gave the most satisfactory results. A very good analysis could be made by first dissolving the powder in warm dilute hydrochloric acid, and allowing the solution to cool, by which means the greater part of the lead was at once separated as chloride. The filtrate was then treated with sulphuretted hydrogen, and the precipitate filtered off and washed. The black sulphides were then digested with warm dilute nitric acid, in which they dissolved completely with the separation of sulphur. Now lead had already been detected, so it was not necessary to test a portion of the nitric acid solution for it; the entire solution was at once treated with sulphuric acid in sufficient quantity to precipitate all the lead, and evaporated until all the nitric acid was expelled. The residue was then added to very dilute sulphuric acid and immediately filtered. If these operations were carefully performed, the quantity of lead sulphate remaining in the

solution was infinitesimal, and it did not in the least interfere with the detection of bismuth. The next step was to add ammonia to the acid liquid, and it was at this stage that some of our correspondents fell into error: ammonia was not employed in sufficient quantity, and therefore no permanent precipitate appeared. Bismuth is precipitated by the alkalis as hydrates, and until the excess of acid in the solution was completely neutralised this precipitate could not form. On the addition of a decided excess of ammonia there was a copious white precipitate, which when separated by filtration was easily identified as bismuth hydrate. The filtrate was perfectly colourless, therefore copper was absent; and it gave no precipitate with sulphuretted hydrogen, therefore cadmium was absent.

The detection of the nitric radicle required some care. It was necessary, in the first place, to separate the heavy metals: This was done either by boiling the powder with a solution of sodium carbonate, or by precipitating the lead and bismuth as sulphides. In either case a solution was obtained which with proper care gave a very distinct reaction with ferrous sulphate and sulphuric acid. There are few tests which require more skill than this. With skill it is a most delicate test, and a valuable one; without skill the test loses all its delicacy, and is liable to mislead.

PRIZES.

The First Prize for the best analysis has been awarded to SAMUEL R. POWELL, 8 Halkin Street, West, S.W.

The Second Prize has been awarded to W. C. REYNOLDS, Guildford Street, Harrogate.

Marks Awarded for Analyses:

S. R. Powell (1st prize)	..	95	S. J. L.	..	..	60
W. C. Reynolds (2nd prize)	..	92	Chisel	..	..	60
A. M. S.	..	90	Testator	..	..	60
Repoc	..	87	A. Howard	..	..	60
T. Guttridge	..	85	A. Mayne	..	..	60
W. H. Goy	..	85	E. P. Greenhalgh	..	..	60
H. Hamer	..	85	Phosphate	..	..	50
E. H. Lee	..	85	Morphia	..	..	50
H. Bowden	..	85	H. D. Kelf	..	..	50
Y. E. T.	..	80	A. Lazenby	..	..	45
Cesar	..	75	Tarara	..	..	40
Dum Spiro Spero	..	75	J. E. G.	..	..	40
W. L.	..	75	Ammonia	..	..	35
F. W. Towan	..	75	Calx	..	..	30
Iridium	..	70	Xylem	..	..	20
Opoponax	..	70	Kalium	..	..	20
Carbo Ligni	..	70				

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

•• All communications should include the names and addresses of the writers.

REPOC.—Your examination for the acid radicles was not sufficiently exhaustive; there was nothing in your paper to show that the greater number of the acid radicles were not present.

W. H. GOY.—The course which you adopted for the detection of the nitric acid was the proper one under the circumstances, but there was not much to detect, so it was necessary to add the sulphuric acid very cautiously to the liquid to be tested, and in which ferrous sulphate had been dissolved, otherwise the brown ring was too diffuse to be readily observed.

H. HAMER.—The treatment to which you submitted the powder would certainly not suffice for the detection of the small quantity of nitrate. A more thorough search for the acid radicles was necessary.

Y. E. T.—Considering the way in which your test for the nitric radicle was performed, it is not at all remarkable that you did not observe the brown ring. You evidently do not understand the test; you ought to make a careful experimental study of it.

CÆSAR.—It is not very clear from your report what you did with the

nitric acid solution of the sulphides; you state that you found cadmium and copper absent, but you say nothing about bismuth.

DUM SPIRO SPERO.—There can be little doubt that in testing for bismuth you omitted to add enough ammonia to the solution. The precipitate which you attributed to cadmium must have been due to bismuth.

W. L.—Your examination for the acid radicles was vitiated by the presence of heavy metals; these ought to have been removed by precipitating them as sulphides, or by boiling the powder with sodium carbonate.

F. W. TOWAN.—Your report was very neatly drawn up. There was, of course, sufficient sodium in the mixture to admit of its detection by the excessively delicate flame test. You must be guided by the amount of residue that remains after separating the other metals and expelling the ammoniacal salts.

INDIUM.—The manner in which your report was drawn up was quite satisfactory. You are not required to give quantitative results. To precipitate bismuth from the acid solution a decided excess of ammonia was required; it is possible you did not employ a sufficiency of the reagent.

CARBO LIGNI.—It was announced that the mixture would contain two salts; you found but one.

S. J. L.—The flame reaction which you observed was due to lead, as you will find if you ignite a little lead acetate or chloride on a thin iron wire. If you use a platinum wire the lead will alloy with it and destroy it.

CHISEL.—Your attempt to detect potassium by means of platonic chloride in the presence of lead acetate is not very creditable. Of course lead chloride was precipitated. See remarks to "S. J. L." about the flame test.

TESTATOR.—It is a mistake to heat an unknown substance, like the subject of this exercise, upon platinum foil, as the foil will certainly be injured if any of the easily-reducible heavy metals are present. The lid of a porcelain crucible or a fragment of a porcelain dish will answer the purpose quite as well.

A. HOWARD.—You did not completely precipitate the lead and bismuth by means of sulphuretted hydrogen, hence the black precipitate on adding ammonium sulphide.

A. MAYNE.—In observing the action of boiling dilute nitric acid upon the sulphides, you must be careful not to mistake the sulphur which separates for undissolved sulphide. This sulphur is sometimes dark coloured at first, owing to particles of dark coloured precipitate which become enclosed in it, and thus protected from the action of the nitric acid. Your tests, showing so clearly the presence of mercury, were apparently quite conclusive, but the total absence of that element throws some doubt upon your accuracy as an observer.

E. P. GREENHALGH.—The precipitate which you obtained on adding hydrochloric acid to the ammonium sulphide must have consisted of sulphur only. This is an error against which it is necessary to guard carefully.

H. D. KELL.—The best reagent to employ for the separation of the sulphides of arsenic, antimony, and tin from the other sulphides of the group is ammonium sulphide. If copper is present a sulphide of one of the fixed alkalis must be used, provided mercury is absent.

J. E. G.—The black sulphides thrown down by sulphuretted hydrogen should have been examined for all the members of the group. You say you added tartaric acid to something, and obtained a crystalline precipitate. It is very difficult to draw an inference from this statement without knowing what solution you were operating upon. Your report should be drawn up so as to show every stage of the analysis distinctly.

TARARA.—If a sulphate had been one of the constituents of the mixture the solution to which hydrochloric acid was added would not have become clear on boiling, as you observed it did. Lead sulphate would have been formed, and it is not soluble in dilute hydrochloric acid.

AMMONIA.—You observe that the mixture was soluble in dilute acid, but you omit to say what acid. You also omit to state whether it dissolved in the cold or on heating. You describe operations without stating what you are operating upon, and you speak of adding reagents without giving any clue as to what they were added to, so that your report is quite unintelligible.

CALX.—You will find it very instructive to repeat the work; the composition of the mixture is given above, so you can readily prepare a further supply.

XYLEM.—The powder smelt so strongly of acetic acid that you ought to have detected that constituent before you opened the paper. You found the powder to be completely soluble in hydrochloric acid; this could not have been the case if a sulphate had been present along with lead.

KALUM.—Your sense of smell seems sadly uncultivated. Until you can distinguish between the odour of chlorine and that of acetic acid, there is very little use in attempting to make any progress in practical chemistry.

THERE is in White Island, N.Z., a lake which is simply a seething, bubbling mass of muriatic acid, and as the liquid boils up the bubbles have their sides in shadow, reflecting a green tinge, the whole surface emitting an intensely noxious vapour. The island is of volcanic origin, and is destitute of animal life. There are large deposits of sulphur in it, the poorest yielding 62 per cent. of sulphur.

Metropolitan Reports.

CHEMISTS' ASSISTANTS' ASSOCIATION.—At the meeting on November 28 a paper entitled "Practical Notes" will be read by Mr. H. Helbing.

ORGANISING.—On Tuesday evening, November 19, a preliminary meeting of the chemists of North Kensington was held at 48 High Street, Notting Hill, for the purpose of forming a chemists' association for that borough. Mr. H. Long, of the above address, is the divisional secretary. A further meeting will be held on Tuesday next, November 26, at 9 P.M., at the same place.

COMMITTAL OF A CHEMIST.—In the City of London Court on Saturday last, before Mr. Commissioner Kerr, the case of Evans v. Marston was dealt with. The proceedings were instituted by Messrs Evans, Lescher & Wehh, wholesale druggists, of 60 Bartholomew Close, E.C., who applied for the committal of the defendant, Mr. George Henry Marston, chemist, of 7 Lordship Terrace, East Dulwich, S.E., for the non-payment of 6s. 9d., the balance of goods supplied to him by the plaintiffs in the ordinary way of business. The plaintiffs' representative said on each occasion the defendant had been before the court the learned Commissioner had committed him to prison. Mr. Commissioner Kerr said it was evidently mere obstinacy on the part of defendant, a chemist, not to pay 6s. 9d. He again ordered his committal to Holloway Gaol for ten days.

THE HOLBORN DISPENSER.—At the usual weekly meeting of the Holborn Board of Guardians on Wednesday night the Clerk said the Dispensary Committee had inquired into the allegations against their chief dispenser (Mr. Strachan) to the effect that he had not complied with the terms of his appointment, viz., to give his whole time to the service of the Guardians, to come and go at certain times, and to enter such comings and goings in a book kept for that purpose. The committee found that the allegations were true. It had been discovered that Mr. Strachan carried on an outside business, and was away from the dispensary "hours and hours," and never signed the book. The committee consequently recommended that he be called upon to resign. Mr. Ross moved this, and Mr. Brighty seconded, the latter remarking that Mr. Strachan had been silly to himself. There was little to do, and three of them to do it; in fact, Mr. Strachan had shown that he was not wanted at all. Mr. Dixie said it was not a question whether or not they were over-manned with dispensers; it was not a question as to the ability of Mr. Strachan; it was simply that Mr. Strachan had not obeyed the terms of his appointment. Dr. Kelly said the hours of attendance at the dispensary were very clearly defined by the orders of the Local Government Board and of the Guardians; and these must be enforced if discipline was to be maintained amongst the staff. The motion was adopted.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

HOSPITAL ABUSE IN BIRMINGHAM.—A meeting of medical men of Birmingham and the district was held on Wednesday at the Medical Institute, Edmund Street, to consider the alleged abuse of the medical charities of the city. There was a large attendance. Resolutions were passed urging the necessity of the managers of medical charities taking the matter into serious consideration, and asking the members of the Hospital Saturday Committee, the board of guardians, and other public bodies to confer with the doctors of the city on the subject.

BRIGHTON.

AN UNSATISFACTORY CHEQUE.—At the Brighton Police Court, on Tuesday, before the Stipendiary (Mr. C. G. Heath-

cote), Frank Aylmer Lagden (32) was charged with obtaining 15*l.*, by means of false pretences, from Mr. W. W. Savage, a chemist carrying on business in St. James's Street. It appeared that prisoner held an appointment in connection with the Admiralty, and several weeks since was spending a few days at an hotel in the town while on his wedding tour. When about to leave he wrote out a cheque on plain paper on the "Military Bank, Fleet Street, London," and induced Mr. Savage to cash it for him, representing that it would be duly honoured on presentation. Subsequently the cheque was returned. It further transpired that the bank was really a money-lending concern, being conducted by Mr. James Pugh, who traded as H. James. That gentleman admitted that he had had transactions with the prisoner during the last four years to the extent of 300*l.* or 400*l.*, all of which he had repaid with the exception of some 5*l.* Frequently he had cashed cheques for him, and had always been repaid, but he declined to cash the one in question. He, however, thought that prisoner had a reasonable expectation that it would be cashed, as he knew he was anxious to oblige him. Mr. Savage asked the magistrate not to commit the prisoner, as in that event he would lose his appointment. The Bench, being of opinion that there was not sufficient evidence to convict, allowed the case to be withdrawn.

LEEDS.

"CLOSED FOR A FEW DAYS on account of illness" is nailed to the shutters of a chemist's shop in the principal street of this town. If the recent decision *re* sale of poisons is upheld it is very possible a similar notice may appear in other towns where a chemist has no apprentice or assistant.

LIVERPOOL.

RAILWAY RATES.—Mr. John Evans has been appointed to represent the Cheshire County Council and the Liverpool Chemists' Association before the commission for inquiring into this matter. He has already discussed with the chairman the injustice, especially to druggists, of so largely increasing the rates on "smalls" or consignments of goods under 5 cwt. In reply he received the somewhat illogical statement that "the companies could even now charge more than they are doing, as they never demand their maximum rate, and they have no intention of increasing present charges, but they are asking for a higher maximum so as to have extended powers in case the increase of wages, cost of coals, &c., should require them to raise the rates."

LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.—At the third meeting of the session of this society, held on November 14, Mr. G. E. Grattan read a paper entitled "Notes on Dispensing." These were the outcome of experience in a well-known Liverpool house. Amongst other matters mentioned was our old friend the pil. pot. permang. It was, Mr. Grattan said, easily made and kept in shape and colour by the use of lanoline as the excipient, which was advocated some time ago in the columns of THE CHEMIST AND DRUGGIST. He showed a sample of the pills in excellent condition which had been made nearly six months, and the coating had remained as good as when first prepared. This was followed by remarks on turpentine emulsions, rhubarb and soda mixture, and Easton's syrup, in which he recommended that part of the phosphoric acid should be replaced by an equal quantity of simple syrup. The paper was discussed by the President (Mr. H. Wyatt), Messrs. Mitchell, Shaw, and Johnson. Mr. Johnson then read a paper on "The Influence of Light on the Growth of Plants." Light, he said, had both a salutary and prejudicial effect upon the growth of plants. He described in detail the way in which it produced these opposite effects, and concluded somewhat in support of an opinion, not commonly held, that the balance of evidence was against light promoting the growth of plants.

MANCHESTER.

MESSRS. THOMAS R. JEANS & Co. have made a considerable extension of their premises at the junction of Broad Street and Cross Lane, Salford, formerly occupied by

Mr. B. Robinson, now Mayor of Salford. They now announce that theirs are "the largest and cheapest drug stores in Manchester or Salford."

THE SMOKING CONCERT to be held next Tuesday night at the Grand Hotel under the auspices of the Manchester Pharmaceutical Association is likely to prove a success, judging from the number of favourable replies received by Mr. Wilson, the hon. secretary, to the invitations he sent out a week ago. We are asked to mention that if any persons on the register residing in the district have been inadvertently overlooked in sending out the invitations the honorary secretary will be glad to hear from them.

"TINCTURES: THEIR SPECIFIC GRAVITY AND EXTRACTIVE MATTERS."—As already reported, Mr. J. C. Husband brought under the notice of the Manchester Pharmaceutical Association at its meeting last week the paper on this subject published in this month's *Analyst*, which formed the subject of an article in THE CHEMIST AND DRUGGIST a fortnight ago. The paper was written, Mr. Husband said, by Mr. J. Spilsbury, a fellow of the Chemical Society, and a pharmaceutical chemist, yet the errors it contained were so apparent, and could so easily have been prevented, that one wondered it should have been published by a scientific man in a scientific journal. There was not time to go over the list *seriatim*. Mr. Husband contented himself with quoting the examples of errors mentioned by this journal, and commenting thereon, concluding with a flash of superlative wisdom, in which chemists were advised to "keep their eyes open and see that the figures to which he had referred did not creep into the pharmaceutical papers and be quoted for more than they were worth."

A WORKHOUSE DISPENSERSHIP.—At a meeting of the Manchester Board of Guardians on Thursday, November 14, the Clerk reported the death of Mr. J. W. Guilmette, who for twenty years had been dispenser of medicines at Crumpsall Workhouse. On the motion of the chairman (Mr. G. F. Fisher) a resolution expressing the deep regret of the guardians at Mr. Guilmette's death, and recording their appreciation of the services rendered by him to the board, was passed and sent to his widow. The Clerk said he had called upon Mr. George Woolley with the view of getting him to recommend a temporary successor to Mr. Guilmette. Mr. Woolley said he had not anybody in his own establishment whom he could spare, but, as a result of inquiries he had made, he had recommended Mr. B. H. Howarth, who was formerly in business on his own account as a druggist in Moss Side, Manchester. The board appointed Mr. Howarth dispenser *pro tem.*, and resolved to advertise for a successor to Mr. Guilmette. The salary attaching to the office in Mr. Guilmette's time was 150*l.* per annum, with 20*l.* extra for taking charge of the drugs at the casual wards at New Bridge Street and the workhouse schools at Swinton.

OUR local societies, of which there is an ever-increasing number, are now in full swing. The Microscopical Society, of which Mr. James Hart, pharmaceutical chemist, continues secretary, held its annual meeting and conversazione a few days ago, at which a considerable number of microscopes and microscopic objects were exhibited. Mr. Hart showed a series of embryological slides representing the development of the chick. At the monthly meeting of the amateur photographers held on Tuesday, November 12, the Rev. H. J. Palmer spoke in terms of high praise of the new Eikonogen developer. He said that during the last few days, when there had been such a yellow light—so unfit for photography—the new developer had rendered him great service. He had an opportunity of taking a portrait of Mr. Gladstone, and although the light was almost impossible, he did his best and made six exposures. He developed four of them, using all the developers he knew of, and as a last resort tried the Eikonogen. The result was a most perfect portrait, which he exhibited at the meeting. Another member, Mr. Stevenson, introduced a very good substitute for the ordinary ruby light. It was a green glass, manufactured in Manchester, by which a much better light could be had for developing, and the strain upon the eyes common in using ruby light was entirely obviated. There has been some correspondence in the local newspapers lately with regard to the desirability of providing a common meeting-place for all the local societies.

NOTTINGHAM.

SALE OF LAUDANUM BY AN APPRENTICE.—On Tuesday an inquest was held at Eastcroft on the body of Rebecca Oakley, aged 50, widow, who was found dead at her home, 51 Romford Street, on the previous evening. It was stated that the deceased had sent for some beer the night before, and when it was brought she poured the contents of a small bottle into it and drank it off. Shortly afterwards she was found dead. Edward Percy Clarke, of 107 Noel Street, apprentice to Messrs. Bass & Wilford, chemists and druggists, said that the deceased called at the shop on the previous night, and asked for an ounce of laudanum, stating that her husband had a cancer in the mouth, and used the drug to rinse it with. He supplied her with the laudanum. The bottle produced was the one which contained the laudanum. Dr. S. Warren said death was due to opium poisoning. The jury found "that the deceased poisoned herself with laudanum whilst in an unsound state of mind."

SHOOTING A JUDGE.—At the Nottingham County Court before Judge Bristowe, William Edward Arnemann, a German, practising as a dentist in North Sherwood Street, Nottingham, sued Mr. C. W. Warriner, chemist, of St. Anne's Well Road, Nottingham, for the sum of 1*l.* 15*s.*, for artificial teeth supplied. The defence was that the teeth did not fit, and the defendant having established this, the plaintiff was non-suited. Later in the day Arnemann, who had evidently been in waiting, met Judge Bristowe at the Great Northern Railway Station, and shot him, seriously wounding him in the back. Judge Bristowe was at once taken to the hospital, where he is now progressing favourably. Meanwhile his assailant was seized and taken into custody. Some time ago Arnemann was prosecuted by the British Dental Association for describing himself as a dentist, and although he produced his German qualification he was fined. Latterly, it is said, he had been in a depressed condition.

RAWTENSTALL.

AN INVALID EXCUSE FOR ADULTERATION.—A case which is indirectly of interest to chemists and druggists was disposed of at Rawtenstall Police Court on Friday week. The Whitewell Bollam Co-operative Society were charged with selling adulterated pepper. The analyst's certificate showed that the sample contained 11 per cent. of sand and 2½ per cent. of other foreign matter. Mr. J. S. Whittaker, solicitor, stated that the defendants bought the pepper as pure from Ormerod & Sons, wholesale grocers, Bacup, and the latter received the cask invoiced as "pure pepper" from the Phoenix Spice Mills, Liverpool. The defendants had not, however, protected themselves by getting a written guarantee. A fine of 10*s.* and costs was imposed, the Bench intimating that in future failure to obtain a written guarantee would not be received as an excuse.

STOCKPORT.

FINED FOR SELLING PILLS.—At the Stockport Police Court on Saturday the magistrates dealt with a charge of breach of the by-laws of the Stockport Corporation, which was preferred against "a middle-aged man of professional appearance," named William Watson, who travels the country selling pills. On Saturday week the defendant commenced selling his wares upon the market ground, without having paid his toll. A crowd of 150 persons gathered, and an obstruction was caused. A fine of 10*s.* and costs was imposed, and the defendant, who was respectably dressed, and was staying in an hotel in the town, was obliged to go to prison for seven days owing to financial difficulties.

THE SALE OF ANTIPYRIN.—A CHEMIST'S ASSISTANT CENSURED.—An inquest of considerable interest to chemists and druggists was held at Stockport last week. The evidence was to the effect that a domestic servant, 22 years of age, named Leah Butterworth, had on the previous Saturday been seized with pain in the head and went to Needham's (late Proctor's) chemist's shop, Shaw Heath, where the assistant, John William Buckley, gave her four packets of antipyrin, telling her to take the contents of one every hour and a half. She took one packet the same night. Next morning she became worse, and died before medical assistance arrived. Dr.

Gordon deposed that he had made a post-mortem examination and found death was due to tumour on the brain. He had seen the packets of antipyrin; there were about 12 grains in each. The Coroner: Do you call 12 grains excessive? Witness: To give 12 grains without a medical examination is excessive. The Coroner read from the instructions given by the manufacturers of antipyrin that its use in cases of weak heart should be guarded, and that it was to be taken "under prescription, and under medical care." Witness, continuing, said it should not be given without an examination of the heart. The Coroner: Would you administer it yourself unless you had seen the patient first? No. It acts upon the heart and lowers the system? Yes, but it would be all right if the patient had not a weak heart. As a matter of fact it has had nothing to do with causing death in this case? I won't say that. I have found sufficient to cause death in the tumour. A Juror: Ought the chemist to have given instructions with the powder? Witness: Most decidedly. John William Buckley was then called. Having spoken to the sale of the powders he was asked by the Coroner: Have you read the directions of the manufacturer? Witness: Yes. Have you read that part in italics? I did not read it until Dr. Gordon came to me. You are perfectly aware that the powder affects the heart? Yes, because I ask people who come to me if they have got a weak heart. Did you ask this girl if she had got a weak heart? No. And yet you told her to take a powder every hour and a half. Are you aware that that might have had a fatal result if she had had a weak heart? I don't think from experience that 12 grains would have any effect. The instructions say that 1½ grain can be given to a child for every year old, and under those circumstances the dose I gave was low. Do you know that the faculty don't prescribe more than 10 grains? Dr. Gordon: That is not so. Witness: They have prescribed 15 grains for a dose. The Coroner: A 12-grain dose might have a serious effect on a weak heart. Has it had an effect in this case? I am speaking for your own good. I have been told that that quantity would not affect the heart. You have no right to administer these powders indiscriminately when you don't know the constitution of the person who buys. The jury wish me to point that out to you, and if you prescribe this again I should advise you not to do so unless you have the authority of a doctor. In answer to witness, Dr. Gordon said witness ought not to have supplied 48 grains without instructions to the patient. The Coroner (to witness): Are you a qualified chemist? Yes. Why did you not write the instructions on the labels? (Witness did not answer.) A Juror: Why did you use Mr. Proctor's name on the labels when he has nothing to do with the shop? We have the labels in the shop, and so long as we are qualified I don't think it matters. I hope, gentlemen, you don't think that any responsibility rests with me in this matter? The Coroner: The powders are not the cause of death, and that is all I can say. The jury are of opinion that you ought not to have given deceased so many powders without any instructions, and that 48 grains is too much to administer to a person whom you know nothing about. A Juror: We are of opinion that you are much to blame. I don't think I should bear any blame for the death. The Coroner: We don't say you should. The Coroner then summed up. He said there was no doubt death was due to the tumour, and the powders had nothing to do with it, but Buckley had no right to sell this drug without any instructions or prescription from a doctor. He thought the assistant was highly to blame. Had he read the instructions he would certainly not have sold the powders. The most important part in italics he had never looked at. A juror said chemists ought not to place young men in care of shops. The Coroner said if the assistants were qualified nothing could be done. A verdict was returned of "Death from natural causes."

Since the inquest Mr. J. D. Willis, a local chemist, has written to the local papers. He says that the most eminent authority in the district on the action of drugs has told him he sometimes gives antipyrin in cases of rheumatic fever, with which, Mr. Willis points out, heart disease is frequently associated. He goes on to protest against the jury censuring an innocent man and badgering him about heart disease, which had nothing to do with the case, and states that had the woman applied anywhere else for the drug she would have been supplied with it in nine cases out of ten. In conclusion

he says, "Antipyrin is only one of the hundreds of drugs comprising a chemist's stock, and so long as there is a public demand, and the drug is safe, the chemist will supply it."

TAMWORTH.

THE DOSE OF LAUDANUM.—At an inquest held last week before Dr. Iliffe, coroner, respecting the death of a child five months of age, the son of Mr. Cox, an auctioneer of the town, evidence was given that two teaspoonfuls of castor oil and three drops of laudanum had been administered. The child soon after dropped into a heavy sleep, and though Dr. Sculthorpe was sent for, his efforts were in vain, and the child died the same night. The coroner said that laudanum ought to be given to children only in exceptional cases, and then the dose for an infant should not exceed one sixth of a drop. The jury exonerated the mother from all blame, and returned a verdict that "Death was due to syncope, caused by the administration of laudanum."

WOLVERHAMPTON.

MISTAKING THE MEDICINE.—A child ten months old died last week after being given half a teaspoonful of a mixture of spirits of camphor and tincture of myrrh in mistake for some medicine for whooping-cough. The doctor said he thought whooping-cough was the ultimate cause of death, and he could not say that the mistake accelerated it. The jury found in accordance with this evidence, but suggested that medicines of the nature of the tooth-tincture, although not poisons under the Act, might be marked "For external application only."

IRELAND.

DEATH.—On Friday, November 15, Mr. Henry G. Grier, chemist and druggist.

MR. SAMUEL MUSGRAVE, dispensary officer at Lisburn, has tendered his resignation, to the regret of the guardians.

MR. R. D. ATKINSON, L.P.S.I., Harcourt Road, Dublin, has established a parcel agency in connection with his extensive pharmacy.

At the annual *r  union* of the Dublin Sketching Club held last week, some choice musical *morecaux* were rendered by Professor Tichborne, L.A.H.

AN enterprising manufacturer named D'Arcy notifies the Dublin public that he is prepared to supply "medicated" lemonade at 1*l.* per stoppered bottle.

A DISPENSARY officer for the Killucan district of the Mullingar Union will on December 3 be appointed at a salary of 145*l.* per annum, exclusive of fees.

PHARMACEUTICAL APPOINTMENTS.—Mr. A. C. McBride, L.P.S.I., of the Belfast Apothecaries' Hall, has been appointed manager of the City Medical Hall, Armagh.

A WICKLOW druggist and general merchant named Kennedy has been drowned by walking accidentally into a neighbouring river. An inquest has been held.

THE new science and art buildings at Dublin have been handed over to the Government officials, and it is expected that they will shortly be opened by the Prince of Wales.

A NOVEL DRINK.—A Dublin druggist's porter named Keogh swallowed last week a pint of Brunswick black in mistake for beer. An emetic promptly administered saved his life.

PHARMACIENNE.—Mr. Anderson—who, by the way, has removed from Parliament Street to South Richmond Street, Dublin—is the first city chemist and druggist to avail himself of a lady assistant.

THE Irish trading and mercantile community are unanimously protesting against the recent decision of the Court of Bankruptcy forbidding the publication of the affairs of arranging debtors.

MR. ROBERT E. McDOWELL, pharmaceutical chemist, Grafton Street, Dublin, last week prosecuted and obtained a conviction against an employ   for assaulting a member of his family.

EVIDENCE of the present stagnation of trade is afforded by the gazetting for sale inside of one week of two Dublin drug establishments, one of which, on the north side of the city is offered almost "at a song."

CONTRACTS.—Tenders for a year's supply of drugs, medicines, oils, &c., are invited by the governors of the Sligo District Asylum, December 4, and by the Irish Lights Commissioners, December 6. The usual stipulations to be observed.

SCIENCE FOR A PENNY.—As a sample of what the "Pat-lender" may obtain for the modest *denarius*, it is worth noting that the classes of the Cork School of Science, embracing an extended course of physics and chemistry, are open to students at the rate of 1*l.* per lecture.

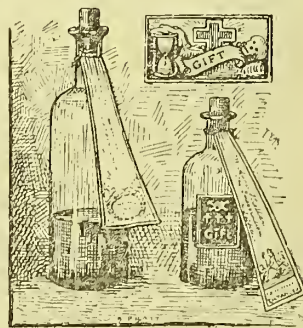
COMMENTING, a few days ago, at an inquest held on the body of a young man whose death occurred shortly after partaking of a draught supplied by a Dublin druggist, the Coroner, Mr. Arthur Chance, L.A.H., passed some severe strictures upon dispensing by unqualified traders, which in his opinion was calculated to endanger the safety of the community.

IRISH PHARMACEUTICAL CHEMISTS' ASSOCIATION.—The usual monthly meeting of this association, arranged to be held on Wednesday, November 13, was, owing to scarcity of numbers, postponed *sine die*. Notices of further meetings will be issued by the honorary secretary, who, in the interim, will continue to discharge the routine of clerical business, and receive the names of intending members.

SCOTLAND.

DUNDEE.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—At last week's meeting Mr. F. W. Young, F.C.S., &c., gave a most interesting lecture on "Fermentation and Putrefaction," a subject which he had taken up from a consideration of the proneness to putrefy which is exhibited by vegetable infusions and such like. The lecture was well illustrated, and was much enjoyed. At its conclusion Mr. Young and Mr. Rutherford Hill (Edinburgh) were elected honorary members.—This week's meeting was held on Thursday, Mr. J. W. Russell, an honorary vice-president, in the chair. There was a large attendance, many masters and ladies being present. Mr. W. L. Howie, F.C.S. (Barron, Harveys & Co., London), delivered a lecture on a visit paid to the Hardanger. The lecture was illustrated by photographs taken by Mr. Howie, and shown by means of the magic-lantern. In the course of the lecture a good deal was said about Norwegian pharmacy, outside and interior views of a pharmacy in Vossevangen being shown, as well as others of pharmaceutical interest. Mr. Howie said that the business done in Norwegian pharmacies is confined entirely to the sale of drugs and the dispensing of prescriptions, and pharmacists have to qualify by passing two examinations and serving an apprenticeship of at least three years. A curriculum has for long been in force, and consequently the business is in comparatively few hands, and happily the preparation and sale of pharmacopoeia preparations is confined to pharmacists. There is one pharmacy in Vossevangen; and in Bergen, with a population of some 40,000, there are only some five or six shops, all eminently respectable-looking, with many of the assistants gentlemen of middle age. Prices compared with ours are low, and the style of sending out medicines to prescription antiquated. Labels are tied to the necks of the bottles in the manner in vogue with our own old apothecaries more than fifty years ago. The ornamental designs of the labels are symbolical of the healing art,   sculapius frequently playing an important part. Snakes, also, with and without the father of medicine, are



seen to drink from cups and fountains in the orthodox fashion. All medicines for internal administration are sent out labelled with white labels, all for external use with red; and, if the lotion or what not contains poison, then an adhesive poison-label is attached. Besides the word "gift" (meaning poison), these labels speak by well-known hieroglyphics. Wrapping-papers are usually tinted, and have the name of the pharmacy and that of the proprietor printed on them. Pharmacies in Norway are named as hotels are in this country. The three best known in Bergen are the Lion, the Swan, and the Heron. The lecture was highly appreciated by the audience, and at its conclusion a vote of thanks was accorded to Mr. Howie, on the motion of Mr. Skinner.

EDINBURGH.

THE ANNUAL MEETING of the Scottish Drug Depot Company was held on November 13, Mr. Galbraith Miller presiding. The directors' report stated that the business during the past year had continued to increase and develop in the most satisfactory manner. Five new branches had been established in Edinburgh, making eight establishments in all. The balance-sheet showed that the capital of the company was 18,733*l.* The profit earned during the year had been 2,142*l.* 11*s.* 9*d.* The directors recommend that 253*l.* 5*s.* 10*d.* should be written off the value of plant and for depreciation, 500*l.* off the value of goodwill, leases, &c., and 93*l.* 14*s.* 7*d.* off preliminary expenses, leaving enough to pay a dividend of 10 per cent., and to carry something forward. The report was adopted.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—An open meeting of this association was held last week. The arrangements were under the charge of Mr. George Coull, B.Sc., chemist to Raimes, Clark & Co. Mr. Coull contributed the first paper, which was a note on "Distilled Water." In this he pointed out that the official test for nitrites is ineffectual, for the simple reason that only starch mucilage and potassium iodide are added, and, as these do not react with a nitrite in the absence of free acid, he recommended that the Pharmacopoeial description of the test should read:—"It is not affected by . . . a mixture of starch mucilage and iodide of potassium to which a few drops of acetic acid have been added." Mr. J. Rutherford Hill also followed with a note on "Distilled Water." He had examined a sample, which he found to be distinctly acid even after boiling. Yet it failed to give the reactions for mineral acids, and further investigation revealed the fact that the acidity was really due to carbonic acid, which is not wholly expelled by boiling. The water gave a precipitate of calcium carbonate on the addition of solution of lime. Some pure distilled water was charged with carbonic acid gas, and after boiling it still gave the acid reaction to litmus, showing the correctness of the foregoing conclusions. The acid sample did not give a precipitate with sulphuretted hydrogen, which was passed through it for a quarter of an hour; but on adding ammonia in excess the sulphuretted water became of a greenish colour, and gave a distinct black deposit in the course of a few days. This was due to iron, probably derived from steam-pipes, much of the distilled water of commerce being the waste steam from steam-boilers. To exclude such water Mr. Hill suggested that the Pharmacopoeia test should be amended. Instead of saying, "It is not affected by sulphuretted hydrogen," it should read, "It is not affected by sulphuretted hydrogen, either alone or after the addition of ammonia." Mr. Coull then gave a sketch of Van't Hoff's theory, showing how it explained cases of physical isomerism, which had puzzled chemists for a long time. He took the two varieties of ethylenes, lactic acid, and fumaric and malic acids, as examples. This was illustrated by means of models and blackboard demonstrations. Mr. Coull exhibited specimens of the two new hypnotics, chloralamide and tetronal, and made a few remarks on their constitution and action. After a good discussion on the papers the chairman intimated that the next meeting would be held on Wednesday, November 27, when a paper on "Our Vegetable Extracts," by Mr. Peter MacEwan, F.C.S., would be read.

GLASGOW.

A DISCUSSION on the sale of poisons by unregistered assistants is probable at the next meeting of the Assistants' Association.

TESTIMONIAL.—On Friday evening, November 15, in Bergner's Restaurant, Virginia Street, Mr. George Muir, of the Glasgow Apothecaries' Company, was entertained to supper by his fellow-assistants and friends, and presented with a handsome writing-desk, on the occasion of his leaving to start business at Helensburgh. With song and sentiment a pleasant evening was spent.

THEFT FROM A DRUG SHOP.—On November 18 William Hogarth was passed on from the police court to the Sheriff on a charge of breaking into the premises of Messrs. Brown Bros. & Co., chemists, Washington Street, on October 3, and abstracting a silver lever watch, eighteen surgical instruments, a quantity of scented soap, and a sum of money. Some days ago he offered the watch to a pawnbroker in town, but the latter promptly summoned the police and gave Hogarth into custody.

GREENOCK.

A PHARMACEUTICAL ANTI-VACCINATOR.—Before Sheriff Nicolson, at Greenock, on November 15, John Peters, druggist, Shore Street, Gourock, was charged for the third time with failing to have his daughter, 29 months old, vaccinated, in accordance with Act of Parliament. He was fined 2*s.* 6*d.*, with 10*s.* expenses, the alternative being seven days in gaol.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

GRIERSON—PAGDIN.—On November 18, at Grandborough, Bucks, by the Rev. Stephen Phillips, M.A., George Arthur Grierson, F.L.S., of Sheffield, to Edith, third daughter of the late John Pagdin, Esq., of Morton, Gainsborough.

LODGE—LEECH.—On November 19, at Tideswell Parish Church, by the Rev. Canon Andrew, Martin Lodge, of Norton, near Doncaster, to Miss A. Leech, eldest daughter of Mr. Frederick Leech, chemist and druggist, of Tideswell.

DEATHS.

HOLT.—By the death of Mr. Edmund Holt, who was interred last Saturday in St. Luke's churchyard, Cheetham Hill, Manchester, that city loses one of its oldest druggists. Although he had only reached his fifty-seventh year, Mr. Holt had been in the business for about forty years, during the greater part of that time on his own account. Until about seven years ago his principal shop was at the corner of Fleet Street, in Deansgate. When that place had to come down for improvement purposes he migrated farther citywards to the premises at 263 Deansgate, which he occupied to the time of his death. At one time he had branch establishments in Chester Road, Regent Road, and other quarters of the city, but these he gave up some time ago. The cares of business engrossed the bulk of Mr. Holt's time and attention, but he always took a lively interest in the well-being of the trade generally. He acted for some time as secretary to the old Chemists and Druggists' Society. For three years—from 1873 to 1876—he was a member of the Manchester City Council.

MIDDLETON.—On November 13, at Cleveland Terrace, Middlesborough, very suddenly, Mr. Joseph Middleton, chemist and druggist. Aged 52.

ROTHER.—We regret to note the announcement of the death at Detroit of Mr. Reinhold Rother, one of the most accomplished of American pharmacists. Mr. Rother had been suffering for some time from the effects of over-work, and died in a hospital on the morning of October 18. Mr. Rother was a retail pharmacist, and for a number of years was most active in research work. There are few subjects which he has not touched, especially those of an advanced chemical nature; yet in regard to practical everyday pharmacy he has enriched literature to an extent which few pharmacists have equalled. Mr. Rother was the author of two books which were very popular in the United States, "The Beginnings of Pharmacy" and "The Chemistry of Pharmacy."

SANDERSON.—At 29 High Street, Peebles, on November 11, George William, second son of W. J. Sanderson, chemist.

Pharmaceutical Society of Great Britain.

NORTH BRITISH BRANCH.

A MEETING of the executive was held in Edinburgh on Wednesday afternoon, the Chairman (Mr. Wm. Gilmour) in the chair. There were also present Messrs. Boa, Gibson, Mackenzie, Stephenson, and Thompson (Edinburgh); John Fisher (Dunfermline); Millar Hardie, and Kerr (Dundee); Alex. Kinninmont (Glasgow); Samuel Lawrence (Oban); Thomas Maben (Hawick); John Nesbit (Portobello); James Paterson and A. Strachan (Aberdeen); David Storrar (Kirkcaldy); and Provost Watt (Haddington). Apologies for absence were intimated from Mr. Daniel Frazer and Mr. Robert McAdam (Glasgow).

NOMINATION OF EXAMINERS.

Mr. JAMES MACKENZIE moved that the following gentlemen be nominated for the year 1890:—

Wm. Inglis Clark, Edinburgh	Alex. Kinninmont, Glasgow
David Brown Dott, "	Thomas Maben, Hawick
Adam Gibson, "	John Nesbit, Portobello
Wm. Gilmour, "	John Bertram Stephenson, Edinburgh

Mr. STORRAR seconded the motion, and the Secretary having intimated that all the gentlemen named were willing to continue in office, the motion was agreed to.

The CHAIRMAN, as one of the examiners, returned thanks for the confidence which the executive showed they had in the board.

THE MEDICATED WINE QUESTION.

The PRESIDENT asked Mr. Paterson if he had anything to say regarding the medicated wine question, which had been left over from the last meeting.

Mr. JAMES PATERSON said he had thought over the matter, and he found it considerably bedged about with difficulties. There were strong objections among them to be enforced to take out an ordinary spirit licence, and there were considerable difficulties he could see in the way of the Pharmaceutical Council getting certain preparations inserted in the Pharmacopœia. It seemed to him the better way for them to pursue was to ascertain exactly the views of the Board of Inland Revenue as to the leakage of their revenue, and in what way the chemist's business affected that leakage, and have a conference with them as to the best means of their getting what they were fairly entitled to. They might come to some common understanding with them, as had been done about tinctures, and then they would be better able to judge what would be the remedy. Of course there would always be new wines coming out. The best way would be to ask the Council—if it was not too mundane to take up the matter—(laughter)—to approach the Board of Inland Revenue. This would free them from the harassing troubles that were being inflicted upon them.

Mr. MABEN asked if in Aberdeen the difficulty was felt as much as ever.

Mr. PATERSON replied in the affirmative. They had had no meeting of the Society in Aberdeen for a month, but he had been asked to bring up the subject again.

Mr. MACKENZIE thought the best plan would be to appoint a small committee to gather in what information could be got regarding this question in Scotland, and lay it before the Council in such a way that they would have no difficulty in going before the Excise authorities. They had no desire to defraud the revenue, but merely wanted a general principle laid down bearing upon the wines. Let them make a standard so that the chemist would know how to act. That, he thought, would meet their difficulty, and would get over any objection any of them felt in regard to this question.

The PRESIDENT expressed the opinion that the Executive should in this matter keep themselves independent of the Council. They should meet the Board in Scotland—he meant the Inland Revenue Board.

Mr. MACKENZIE said they had no authority in Scotland now; the two Boards were amalgamated.

Mr. KINNINMONT regretted that members who held licences were not present, as he would like to have their

opinion as to the practicability of their reconciling their licences with other branches of the trade. He would be sorry to introduce into this country a general spirit-licensing for chemists—a system which they were trying to get rid of in America. He did not sell any of these wines, such as coca, which he described as an insidious tippie. As a chemist he would be sorry to think they should be compelled to have a grocer's or spirit licence at ten guineas a year.

Some conversation followed, in which the opinion was expressed that the Revenue authorities should specifically define the wines which would be permitted to be sold without a licence, and

Mr. THOMPSON proceeded to say that the wine question did not affect his firm much. The sale was decreasing.

Mr. J. H. FISHER said, was it not sufficient that those who were specially affected should make a personal application to the Board of Inland Revenue? There did not seem to be any great demand for these wines, especially in the part of the country from which he came.

Mr. KERR said it was not worth the trouble of applying for all the trade they did. He approved of the proposal to approach the Inland Revenue upon this matter. Let them have something definite. If a wine was so medicated as would prevent it being used as a table wine, let that be under a special licence, or stamped by the Revenue. That would meet their requirements, but to go before a court and stand alongside grocers and others applying for licences he did not think was very nice, and not at all becoming. Special licences might be granted after wine made by themselves, whether beef or malt wine, had been tested by sample at Somerset House. There it could be stamped. This, he thought, would meet all their requirements.

Mr. WATT: What is your licence at present?

Mr. KERR: 2*l.* 4*s.* 2*d.* You can get a dealer's licence for 10*l.* 10*s.* from the Excise, and you do not require to go before any court.

Mr. STORRAR said there were in Kirkcaldy two dealers who were not under the control of the magistrates. More than that, a traveller urged him to take his goods and the firm would pay for the licence.

Mr. WATT said that as far as he could make out the result of the discussion was that with very few exceptions they were all disposed to repudiate the idea of having a grocer's licence in connection with their premises. They would be on the down grade at a tremendous rate if they were to compete with the publican in the sale of any of these liquors. He was told that in that town there was a very large store which made all their profit from the sale of drink, and all the other departments were carried on with no profit, or next to nothing. Chemists on the down grade might attempt to do that, but those who wished to see the trade enjoying a position of respectability would at once repudiate the idea. He was sorry to see that in England such licences were becoming very common. As a body he thought they should approach the Inland Revenue to define the strength of pepsin and other wines which chemists would be allowed to sell.

Mr. PATERSON thought that if they left it to local associations to make representations to the Board the matter would be shelved.

Mr. WATT remarked that if they asked the Council to make a representation to the Board they must put their ideas in a specific form.

Mr. PATERSON then moved—

That the Executive of the North British Branch request the Pharmaceutical Council to approach the Board of Inland Revenue to ascertain their views as to the conditions on which chemists can sell medicated wines, such as coca or pepsin, without infringing the law.

Mr. STORRAR submitted as an amendment—

That with the sanction of the Council a representation be made to the Board of Inland Revenue requesting them to formulate their views as to the sale of medicated wines by chemists, and that a committee of this Executive be appointed to draw up such a representation to be submitted to the next meeting of the Executive.

The CHAIRMAN thought they should not delay till next meeting.

Mr. STORRAR said he would alter his motion to the effect that it be remitted to the General Purposes Committee.

Mr. FISHER seconded Mr. Paterson's motion.

Mr. MABEN was of opinion that Mr. Paterson's motion was not definite enough. He therefore moved—

That it be remitted to the General Purposes Committee, with powers to communicate with the authorities on the question of medicated wines.

In other words, giving them discretionary power.

Mr. Storrar here withdrew his motion in favour of Mr. Paterson's, and, after some further discussion, the latter was carried by a large majority, only Mr. Mackenzie voting with Mr. Maben.

MR. WATT ON UNQUALIFIED ASSISTANTS.

Mr. WATT said there was a small matter which he wished to mention in order to prevent any misconception. They were all aware of a recent vote which had taken place in the Pharmaceutical Council.

The PRESIDENT: Is this not still *sub judice*, Mr. Watt?

Mr. WATT: It is public to all the world. The journals are all discussing it. Continuing, he said he merely wished to make a statement to remove the misconception which had originated with reference to his views as to the position of unqualified assistants. They were all aware that the prosecution which the Council had instituted was one that appeared to him at the time to be not worthy of the Council to enter upon. The defendant was an assistant of a qualified chemist, in a branch shop of a qualified chemist, with a qualified manager, and in the absence of the latter he sold a poison which, as they knew, was made up, and required no skill or dispensing in giving it out. This young man could not be qualified; he was not of an age to be qualified, and they would quite understand that in deciding upon the question he (Mr. Watt) had to decide purely upon the question that was before him, and that was whether the Council should prosecute this young man, who could not be qualified to sell an article, and who sold it in the absence of his master. He believed that it was held, and he thought it was a legal opinion, that an unqualified person could sell in the presence of a qualified master, so that the question resolved itself into this, whether persons learning their trade were entitled to sell any poison, and whether he could learn his trade properly without selling the poison. (Hear, hear.) That was the question they had to determine, and he thought, though technically this young man committed an offence, yet it was one upon which it was unworthy of the Society to prosecute. Of course they had the coroner's letters, apparently pressing them to prosecute, and upon that the majority of the Council formed a different opinion from his (Mr. Watt's). He would state this generally, that he thought that the master was the person liable for the apprentice and for the assistant up to a certain time, and that during that time the apprentice should be allowed to learn his trade and to sell. He would not say to what certain age, for he had not as yet thought that out; but during the time he could not be qualified he should be allowed, in learning his trade, to sell poisons, and the master should be held responsible. That, he thought, was the doctrine he would lay down. The case in itself was a very small one, and one of not much matter, but under it lay a very important question. It was a doctrine which was held, and which had been advocated very ably by their President, that the seller, and the seller alone, was the person who should be prosecuted. If they carried that out to its legitimate result—he did not believe they could do so—but if the seller was held to be the person alone responsible or liable to be prosecuted, it allowed bogus or limited companies to carry on business if they had one qualified person, and, therefore, he thought it was fatal to the interests of the Society to hold that view. He believed that to be the foundation of a great number of the ills they laboured under. The Society was bound, he thought, to go against the seller in all cases where he was of sufficient age, and when he was acting where the master could not be present.

The CHAIRMAN said he had allowed Mr. Watt to make his statement, but he could not allow discussion, as the matter was still *sub judice*.

Mr. Kinninmont was about to speak on the subject, when Mr. Gilmour vacated the chair, and the proceedings were brought to a termination.

EVENING MEETING IN EDINBURGH.

The session of evening meetings was opened in Edinburgh on Wednesday night, when an exceptionally large number of members and assistants came to the lecture hall in York



THOMAS RICHARD FRASER, M.D., F.R.S., F.R.C.P.E., Hon. M.P.S., &c.,
Professor of Materia Medica and Clinical Medicine,
Edinburgh University.

Place to hear the opening address by Dr. T. R. Fraser, F.R.S., Professor of Materia Medica in the Edinburgh University.

Mr. WM. GILMOUR, F.R.S.E., who presided, in introducing Professor Fraser, congratulated the members on their good fortune in getting so eminent a pharmacologist to address them. The North British Branch had always been on amicable relations with the leading Edinburgh scientific and professional men. Thirty-seven years ago Professor Fraser's predecessor—the late Sir Robert Christison, who was a great friend of the branch, and one of the Society's first honorary members—had agreed to open the session, and at the last moment he was compelled by illness to give way to another. Sir Douglas MacLagan, one of the most brilliant members of the medical faculty, had often addressed the branch; so had the late Professor Archer, and last year Professor Crum-Brown had opened the session. Professor Fraser was well known to them, by his work if not personally, and he felt that he needed no introduction, but as one of the honorary members of the Society he was sure that they accorded him a hearty welcome.

The meeting enthusiastically reciprocated this sentiment when Professor Fraser rose to deliver

THE OPENING ADDRESS.

He said that when he had been asked to address the meeting he had readily consented, for he recognised that the Society's work was in many respects associated with his own occupation and interests. The Society had been good enough to make him an honorary member, a compliment with which he was much gratified. He thought the North British Branch could point to a record of usefulness as a part of the Pharmaceutical Society. It had started with Mr. Duncan, the founder of the world-famed firm of Duncan, Flockhart & Co., as president, and Bailie J. F. Macfarlan as vice-president, with whom were associated such men, eminent in business, as Mr. William Ainslie, the late Mr. H. C. Bailden, Mr. Thomas Smith, the late Mr. John Mackay, and others. Since its foundation 38 years ago the branch had grown in influence and usefulness, not in Edinburgh merely, but over the whole of Scotland, and the best proof of that was when a few years ago the Society had found it necessary to acquire a house in modern Athens for their own use. The formal opening of the house was an event which he could remember as one of no mean public interest. Proceeding to speak of the Society's work, Professor Fraser said the Society had always kept in view the advancement of its members in those sciences which bore upon their occupation. They had creditably fulfilled this function, the communications to the evening meetings, during the whole of its existence, having been most valuable. But the Society had other important functions. According to its charter

one of the chief objects of its existence was the promotion of a uniform system of education. This object was ratified by Act of Parliament subsequently passed, by which Act it was intended to facilitate a uniform system of education by establishing a register of qualified persons, and by placing the dispensing and sale of poisons in the hands of such persons. Sufficient time had passed since the passing of the Act whereby these points were legalised to justify an inquiry as to the success or failure of the enactment. Professor Fraser indicated that his information showed that he would have to address himself to the partial or complete

FAILURE OF THE ACT,

and he said he would consider what changes it was desirable to bring about in the regulations in order to render the future more satisfactory. At this point he acknowledged his indebtedness to Mr. J. Rutherford Hill for assistance in his inquiry; from the books that Mr. Hill had supplied him with he had gathered that the educational problem was exercising the minds of eminent pharmacists, who considered that the means of education hitherto adopted for chemists and druggists were insufficient. The present means really meant apprenticeship and examination. There was nothing definite in the Act about education, but the Society had established a school in London, and had fostered provincial education in a liberal manner. He approved of apprenticeship as an excellent means of training, but there was abundant evidence of the

INSUFFICIENCY OF EXAMINATION

as an evidence of qualification. If examination were elevated to being the sole gauge of knowledge, it not only failed in its object, but degraded knowledge by substituting veneer for real education. Early in its career the Pharmaceutical Society had established the Bloomsbury Square school to meet the recognised insufficiency. At the commencement they had secured the services of Jonathan Pereira, Fownes, Redwood, and Todd Thompson. Now on the professoriate were such well-known and able men as Dr. Attfield, Mr. Dunstan, and Mr. Holmes. It seemed, however, that the educational opportunities which were provided were not fully appreciated, either in London or the provinces, by students, who found elsewhere a more congenial means of preparation. There could not be any objection to this, were it not, as competent judges thought, that the portal which admitted to the calling was too wide—that it gave great latitude for “cram” and slipshod work. There was a foreboding of this in the Act of 1852, which appeared to anticipate a curriculum. Although this safeguard was not incorporated, still it was kept in view; for years it had been the topic of discussion, and it occupied the chief place in the Pharmacy Bill of 1889. He thought that Bill was likely to pass soon, and when it did pass

DIFFICULTIES WOULD ARISE,

especially in England, in regard to the provision of satisfactory classes for students. He pointed out that the subjects of pharmaceutical education were already provided in universities and colleges, and trusted that they would be adopted as the schools of the future pharmacists. In Edinburgh they had already, by the forethought of the executive of the branch, been utilised for that purpose. There was no reason why botany, chemistry, and materia medica should not be obtained in the universities, and he could conceive of no more efficient means of

ELEVATING THE STATUS OF PHARMACISTS

than by following the example set us on the Continent, in recognising the claims of pharmacy within the universities of Scotland and England. He believed that the time would come when further steps might be taken on behalf of pharmacists. His idea was that if universities undertook the teaching of pharmaceutical students it was not unreasonable to invite universities to confer a diploma in pharmacy. He thought such a diploma would be an advantage to pharmacy if the title conveyed definite recognition, and entitled the holder to registration under the Pharmacy Act. Perhaps the Pharmaceutical Society would have to assist the universities by deputing examiners to co-operate with the

university boards. As to the curriculum which the students would have, he thought that much good might be anticipated from it. The present Preliminary examination would be retained, with German or French and bookkeeping added. He also suggested that the Major examination should include the histology of vegetable drugs, and a thesis should be required which would embody the results of an original investigation. In this connection Professor Fraser referred, in terms of admiration and respect, to the work done by Pereira, Daniel Hanbury, T. B. Groves, J. Elliot Howard, Paul, Alder Wright, Dott, and Holmes; then turning to the educational question again, he said that it was one which could not be dismissed without reference to another matter, viz., that the difficulties of registration increased more rapidly than the commensurate advantages. There was possibly some foundation for the supposition that the protection of all State-protected occupations was never perfect protection. Against that he urged that the improvement of qualification facilitated the granting of more protection. It would be unwise, he thought, to defer obtaining powers to raise qualification until protection had been granted; and referring to the “stores” difficulty, the professor said that he was opposed to the assumption by a corporation of unqualified individuals of the rights and privileges of qualified persons. Increased education of the chemist would, he believed, bring more dispensing; and he pointed out that the tendency of medical education was to give all such work to the pharmacist. In concluding Professor Fraser said that pharmacists could not afford to stand still; medical knowledge was advancing, and keener tools were required. Greater knowledge was the most effectual agency for raising the position of pharmacy and for giving pharmacists higher public consideration.

The address was well received, and on the motion of Mr. J. B. Stephenson, seconded by Baillie Paterson, a vote of thanks was accorded to Professor Fraser. Baillie Paterson said that the curriculum scheme which Professor Fraser had sketched would be accepted in the North. Professor Fraser, in replying, said that the Scottish university system readily adapted itself to the requirements of pharmacists, and if his proposal to bring pharmacists and universities together were approved, there need be no great delay in getting a workable scheme.

MIDLAND COUNTIES' CHEMISTS' ASSOCIATION.

THE second meeting of the session of the Midland Counties' Chemists' Association was held on Tuesday night at the Mason College, Birmingham. Mr. Alfred Southall presided, and there were present Messrs. Jas. Hinds, E. Corfield, R. A. Cripps, G. E. Perry, W. E. Elliott, H. Campbell, Jos. Spencer, W. C. Crane, N. Hodgetts, C. F. Jarvis, J. Drew, W. S. Atkins, S. W. Lowther, Chas. Thompson, and F. H. Alcock (hon. secs.).

Mr. R. A. Cripps contributed the following notes:—

NOTE ON CAJUPUT OIL.

Some time ago my attention was drawn to a sample of lin. crotonis which did not form a clear solution, but consisted of two layers, the upper and larger one being thin and limpid, the lower one oily. When warmed the liquid became homogeneous, but again separated into two layers on cooling. The cause was evidently not due to the croton oil, the same sample having on former occasions given a clear liniment. The spirit used was of B.P. strength. It was therefore clear that the cajuput oil was at fault. I therefore examined the oil, and found its specific gravity to be .913. This being so much below that of any sample I had previously examined, I concluded that the oil was either adulterated or that the distillers of cajuput oil are in the habit of collecting the distillate in fractions, without subsequently mixing them, this being one of the earlier fractions. I have therefore examined a number of samples in the original bottles (old wine or spirit bottles), with the following results:—*a*, 2 samples of specific gravity .926; *b*, 2, .9255; *c*, 7, .925; *d*, 11, .9245; *e*, 28, .924; *f*, 15, .9235; *g*, 13, .923; *h*, 2, .9225; *i*, 9, .922; *j*, 2, .921; *k*, 2, .920; *l*, 1,

·913; *m*, 1, ·8945—average of 95 samples of cajuput oil, ·9232; 93, excluding last two samples, ·9236. The colour of the samples varied from pale brownish yellow to bluish green, the colour bearing no relation to the specific gravity. With the exception of the sample of specific gravity ·913, all these oils came in four separate consignments, the members of each consignment varying in specific gravity to the extent of from three to seven degrees in the third decimal place, not counting the last anomalous sample, although 85 out of the 95 samples ranged from 922 to 925. I think, therefore, we may consider it proved that the mixing of various fractions or batches of oil is performed very imperfectly or not at all. The anomalous sample "*m*" possessed a slightly peculiar odour, was of a pale bluish-green colour, and failed to make a satisfactory croton liniment. I have not yet been able to further examine this oil, but intend submitting it to practical distillation at an early date. I may mention that it is important that the specific gravity of cajuput oil be taken at exactly 15.5° C., in consequence of the high expansion of the oil (which I have found to be ·0009 for each 1° C. between 13° C. and 23° C.), unless this equivalent be borne in mind. In consequence of these results, together with the specific gravities given by Mr. West (*THE CHEMIST AND DRUGGIST*, September 8, 1888, page 303), I should suggest that the Pharmacopœia contain amongst the tests of cajuput oil specific gravity from 922 to 926 at 15.5° C.

OIL OF ROSEMARY.

In recent numbers of the *Pharmaceutical Journal* [and *THE CHEMIST AND DRUGGIST*] attention has been drawn to the use of petroleum as an adulterant of cassia oil. There is very little doubt that this substance is largely used for the purpose of sophisticating essential oils, but I have not seen any published notice of its use in the case of oil of rosemary. Quite lately I have had occasion to examine five samples of this oil, four of which proved to be adulterated, two with petroleum and two with alcohol. The quantity of each at my disposal was very small, or I could have made a more extended examination of them. I need scarcely remind you that the petroleum used is necessarily the heavier portions, consequently it may be detected and approximately estimated by exposing the oil to the heat of a water-bath in an open dish until the odour of rosemary is practically lost, the residue consisting of petroleum and a slight resinous portion which is always left by the oil. Alcohol may be detected by agitating the oil with a particle of magenta. If pure, no colour is imparted to the oil; but if adulterated the dye dissolves, the colour being deeper the greater the quantity of alcohol present. Having detected these impurities as mentioned, I took the solubility of each oil in rectified spirit 833:—(1) Pure oil, 1 in 5; (2) adulterated oil (petroleum), about 1 in 20; (3) adulterated oil (petroleum), about 1 in 31; (4) adulterated oil (alcohol), 1 in 4½; (5) adulterated oil (alcohol), 1 in 3½. Sample No. 2 was distinctly fluorescent, and both 2 and 3 were of full yellow colour.

In the discussion on these papers Mr. PERRY said he did not gather from Mr. Cripps whether the cajuput oil he mentioned was simply adulterated, or was a product that had the peculiarity. He certainly had never met with any cajuput oil that would not mix. As to the rosemary, he should like to know whether Mr. Cripps had come to the conclusion that it was adulterated with a smelling oil of petroleum, or a purified oil, and whether if purified petroleum he could tell them how it was commercially freed from its disagreeable odour.

Mr. ALCOCK asked Mr. Cripps whether, seeing that the difference in the colour of the cajuput oil was so marked, he found copper in any of the samples. Perhaps he might also be able to tell them what the colour was really due to—whether copper or chlorophyll, or a combination of both. Then, again, had he tried the flashing point, which in some instances would be an important test for differentiating the terpenes from petroleum? Had he in the course of his investigations come across the yield of oil per cent.? This figure seemed to be difficult to obtain, because the oil was not distilled in England, but by those Mr. Cripps described as blacks.

Mr. CRIPPS, in reply, said that the colour of cajuput oil varied from a brownish to a deep green. He was inclined to

believe that the colour was due to copper in that case. As to the distillation, he could not tell how it was performed, but it was probably done by blacks in Java or the neighbouring islands, or by the Chinese. Perhaps the reason why many of them had not met with cajuput oil behaving in the strange manner he had spoken of was because the oils were mixed by wholesale houses, and they did not have an opportunity of seeing such kinds as he described. He could not say anything as to the yield of cajuput oil. He had not seen any statement on the point. The flashing-point Mr. Alcock mentioned, he considered, would hardly affect the heavy petroleum of the nature used to adulterate, which had a flashing-point equal to or higher than that of rosemary.

Mr. Liversedge then successfully demonstrated a method of ascertaining the amount of carbonic acid gas in the air of the lecture-room. His experiments were followed with the greatest interest.

THE PATENT MEDICINE ACTS.

MEETING IN NEWCASTLE.

A MEETING of the chemists and druggists of Northumberland and Durham was held on Wednesday night in the County Hotel, Newcastle-on-Tyne, to receive the report of the committee appointed on February 13 to investigate the working of the Patent Medicine Act, and to decide on future action. Mr. B. S. Proctor (chairman of the committee) presided, and among those present were Mr. Riddle, Hexham; Mr. Clague, Mr. G. Weddell, Mr. Ford, all of Newcastle; and Mr. Harrison, of Sunderland.

The report was taken as read.

The CHAIRMAN moved its adoption. He said that if they carried it as it was they did not commit themselves to any future course of action. The report expressed the opinions and conclusions at which the committee had arrived. It did not involve even a petition to Parliament, or petition to the Board of Inland Revenue, or any other step. That was left for them to determine after the report had been adopted. Commenting on the report, he said the committee had endeavoured to include in it all that was learned as the result of their correspondence with the Inland Revenue, and as the result of the information which they had obtained from members of the trade who had corresponded with them. He thought the report was free from all points of a debatable character, but it contained several points he would like to draw their attention to. There was, for instance, a paragraph regarding Dale's plasters, which said, "There can be no doubt of their liability to stamp duty as a nostrum or proprietary medicine." These were the words of the Board of Inland Revenue, and they were not true. So long as he doubted it there was a doubt. (Applause.) But he was not the only man who doubted it. He believed they all doubted it—(hear, hear)—and he held, therefore, that there was a doubt, and that it was an assumption on the part of the Board of Inland Revenue to say there was no doubt. The Board of Inland Revenue, in their second letter, said the use of the possessive case in the description of "Dale's plaster" put the article forward as proprietary. The possessive case, he remarked, did not clearly make the article of a proprietary nature. He knew scores of cases where the possessive case did not imply that, and it was begging the question to say that it did. Further down, the Board's letter said that, in addition, parties had in many cases claimed the exclusive right and title to make the plasters, and that it was, therefore, within the charge. Well, if the first was a good argument, why did the Board put in the second? Simply because they had to use two arguments, and they were both bad. The possessive case did not imply proprietorship and exclusive right, and the fact that some person had claimed that did not make the article liable when in the hands of any other person. When he wrote the Board three times he could not get the point elucidated. If his friend Mr. Weddell could advertise as a proprietary article an article bearing the same name as one which he sold, and which made his article liable to duty—if that was law—the law would be so awkward that he thought the Board of Inland Revenue itself could scarcely have the face to put it

in force. If they acknowledged that that was not the law they opened the way to an amount of difficulty which they were themselves afraid to face. The Chairman then referred to one or two other matters which were elicited by the committee in their correspondence which were not generally known in the trade. In summing up the whole report, he said the committee considered the information they had collected afforded ample evidence that the Inland Revenue were unable clearly to define the law. He referred to the liability and non-liability which had, as stated in the report, been declared by the Board in regard to the same drugs, and said that in these cases there had been no changes of circumstances or of law, but that the second samples had been sent up by accident. In view of these uncertainties in the interpretation of the Stamp Acts, the committee thought it would only be reasonable on the part of the Board to inflict no fine for the use of any label unless it was continued to be used after they had given notice to the man that it involved liability to stamp duty. The question was whether they were to endeavour to effect a modification of the Act or a repeal of it altogether. But that would come on afterwards, and at that point he would simply move the adoption of the report.

Mr. WEDDELL seconded the motion.

Mr. RIDDLE, Hexham, supported the motion.

Mr. HARRISON, Sunderland, also supported the motion. He said the law should be so clear that all men who desired to obey it should have no difficulty in knowing what the law was. The law, he held, should be laid down on such principles that no man would have any difficulty in knowing how he stood. The very department responsible for the exercise of the law was unable to tell them such a simple matter as whether cod-liver oil was or was not liable to duty. That showed a state of things they ought not to rest satisfied with. The whole law was a remnant of a semi-barbarous age. For the State to inflict a penalty upon a man because he happened to be struck with illness was an unjust position. He took it that the State had a direct interest in that. It was to the interest of the State that a sick man should be restored to health as soon as possible. A sick man was a loss, a healthy man was a gain to the State. And yet there they were making it incumbent, before a man should use certain medicines, he must pay a penalty to the State varying from 12½ to 25 per cent. That was an unjust and immoral state of things which should not exist. If a man was sick he must pay a duty to the State for his medicine, but he need not do so for his horse if that was sick. Such a state of things was intolerable.

Mr. ARROWSMITH, Newcastle, also supported the motion, and hoped the meeting would come to some definite decision.

Mr. CLAGUE, Newcastle, in supporting the motion, showed from history that the Patent Medicine Act was brought into existence to put a stop to quackery as opposed to regular practice.

The motion was carried unanimously.

Mr. WEDDELL, Newcastle, moved—

That this meeting of chemists and druggists, representing Northumberland, Durham, and the neighbouring counties, believing that the Acts under which duty is charged on medicine involve unnecessary and vexatious interference with the conduct of the drug trade, and an unwise obstruction to the use of desirable information on the labels of potent medicines, resolves to petition Parliament for the repeal of the said Acts, and empowers the chairman and a committee to give effect to this resolution and to enlist the co-operation of members of Parliament.

After briefly sketching the history of the Medicine Stamp Acts, the principal of which, he said, had had an existence of threescore and ten years, and by great and manifold long-suffering might live to fourscore years, he said he was sure everyone present sincerely hoped that before that time it might be comfortably dead and decently buried. Having next summarised the liabilities created by the Act, Mr. Weddell said it seemed simple indeed to the uninitiated, but, alas for the pride of human wisdom! it was now long past the comprehension of either Greeks or barbarians. Notwithstanding seventy-seven years of experience in the administration of this law, the authorities themselves were totally unable to clearly define the law! Everyone who had had occasion to write them must grate-

fully acknowledge the courtesy with which inquiries were met, but there was the greatest inconsistency in their interpretations. Being unlearned in medicine, the authorities had to be taught by chemists that Beecham's pills and Gregory's powder were not alike proprietary medicines, and while they had made several gracious exceptions, they had claimed the entire possessive case as liable to duty. This appeared frivolous when it appeared that by omitting the "s" a medicine is freed from duty. Thus, by calling an article "Dale plaster," or "Healing plaster Dale," it might be sold without a stamp. To show, further, the absurdity of this law, he mentioned that the price of "Dale's plaster" is 1d., and the stamp 1½d., so that the duty is 150 per cent. on the value of the article. Again, the Inland Revenue Department fails to define the nature of a secret, and they create an absolute revolution in the English language when they endeavour to define what are "human ailments" and what are not. Thus, chilblains, sore lips, sore throat, sprains, and heartburn are ailments; but chapped hands, chapped lips, clergyman's sore throat, bites or stings of insects, and constitutional weakness are not. Then as to recommendations more confusion is introduced. You may say "cough lozenges" but not "lozenges good for cough." You may say "corn solvent" but not "corn eradicator," &c. A great country like this ought to be ashamed of such childishness in the administration of the law. But if the authorities are thus unable to define the law, ought chemists to be any wiser? They, too, are not infallible, and they are therefore under the harassing conviction that they may be pounced upon at any time for an offence of which they cannot know the nature, so as to protect themselves. As a rule, chemists do not want patent medicines. But they do want to sell drugs to supply the wants of the public. And the chemist should be at liberty so to label his wares that they shall not be a danger to the community. Yet the Inland Revenue authorities have decided that you must not send out a pennyworth of drugs bearing instructions for the uses to which it is to be put without becoming liable to the stamp duty! Mr. Weddell went on to argue that it was not fair to chemists that in this uncertain state of the law they should be treated like disreputable shebeeners; also that it brought the law into contempt, and encouraged the Inland Revenue officers to arts of deceit. The stamp, he said, is no protection to the proprietor against infringement, nor to the public in regard to the safety of the medicines, but it has become a bait to tempt the unwary. The medical profession are most anxious to see the Act repealed. The days were past when the Government taxed everything, and it was beneath its dignity to maintain this tax on the ignorance of the people.

Mr. Arrowsmith seconded and Mr. J. F. Forster (Newcastle) supported the motion.

As an amendment,

Mr. HARRISON moved:—

That steps be taken to secure exemption from medicine duty for all preparations made according to the formulae of any British or foreign Pharmacopœia, and described and sold as such, and all medicines for which there is not claimed either exclusive right of or secret process in their manufacture.

He was not prepared to adopt in its entirety the action recommended by Mr. Weddell. He agreed that the law was now most unsatisfactory, and that it should be made plain, but he was inclined to amend rather than to end the Act. He believed the carrying out of the policy suggested by his amendment would make them able to carry on their business with perfect impunity. He, of course, left it open as to what steps should be taken. He thought the matter was one for the consideration of the Pharmaceutical Society. They would have the *entrée* to Government departments better than ordinary individuals, and he hoped that all chemists and druggists would show themselves determined to effect a reform in the matter.

Mr. CLAGUE seconded the amendment, which was supported by Mr. Todd and Mr. Riddle. On being put to the meeting it was carried, sixteen voting for it, and six voting in favour of the original motion.

It was agreed to send a memorial embodying the terms of the resolution to the Pharmaceutical Society.

Mr. HARRISON then moved:—

In view of all this uncertainty in the interpretation of the Stamp Acts your committee think it would only be reasonable on the part of

the Board to inflict no fine for the use of any label, unless the same was continued to be used after they had given notice to the user that it involved liability to stamp duty.

Mr. TODD seconded the motion.

A committee having been appointed to carry out the working of the resolution, and a vote of thanks having been given to Mr. Proctor for presiding, the meeting ended.

THE UNQUALIFIED SELLER OF POISONS.

DISCUSSION BY LIVERPOOL CHEMISTS.

A SPECIAL meeting of the Liverpool Chemists' Association was held on Thursday afternoon last expressly to discuss the question of the sale of poisons by unqualified assistants. There was a fair attendance, many of the older members of the Society, not often seen at its meetings, putting in an appearance. Mr. A. H. Samuel (President) occupied the chair, and briefly explained the purpose of the meeting, and called upon Mr. A. C. Abraham, as a member of the Pharmaceutical Council, to introduce the subject.

Mr. ABRAHAM read a statement of his views on the matter. He said it was not a personal matter with him or his firm. They could, as in most houses where a number of assistants were employed, arrange to comply with the new reading without difficulty, but there were others to whom it would be more serious. It was evident that the Council had never held during twenty years the opinion which they had recently endorsed and acted on. If it were a question of a new Act he should probably support the new view. The Council did not fully believe that this new view was consistent with the present Act, but it had lost several cases from the old point of view, and now wished to try the other. He believed an appeal would not be unacceptable to it.

Dr. SYMES followed. In a long speech he traced the history of the Pharmacy Act, and argued that it was not intended when the Act was drafted to make the 15th section apply to assistants. He quoted passages from the Act which he considered supported this view, especially the apparent authorisation of the sale of poisons by unqualified apprentices which appeared in the 17th section. In its main lines Dr. Symes's argument was similar to that contained in the letter by him published on p. 739 of this issue. He concluded by moving—

That in the opinion of this meeting the Pharmacy Act does not contemplate or authorise legal interference with assistants employed by and performing duties under the direction of qualified masters. That both in spirit and letter it regards the master as the seller—the person responsible to the public and amenable to the law.

Mr. PARKINSON seconded the motion. He said he felt some degree of sympathy for the Pharmaceutical Council in the action they had taken. They had been cornered by the coroner; but he was astonished at the course they had taken, and he thoroughly endorsed the view so fully expressed by Dr. Symes, that the Act never contemplated anything of the kind.

Mr. HOCKIN supported the resolution. He said apothecaries could employ unregistered men, as their business was specially exempted from the operations of the Pharmacy Act, and from the nature of that business they could not superintend the sales so well as a chemist could.

Mr. KIRBY also supported the motion. He argued that clause 17 clearly contemplated that an apprentice should sell poisons, and in attempting to put another construction on other clauses of the Act they made it self-contradictory. The person to whom the public looked was he whose name was on the label—that is to say, the proprietor.

Mr. DICKINSON agreed with the motion. In the case tried at Wandsworth, he said, the judge looked only at section 15, and did not look at both sides of the question.

Mr. WARD said, looking at sections 15 and 17 separately, two different opinions could be formed; but taking the two together, there could be no doubt but that Dr. Symes's view was correct. The men who framed the clauses could not have intended to hit at assistants; they were employers of unexamined men at the time, and could not have complied with the requirement. Employers of labour were always

spoken of as doing the work. Nobody ever said he bought an article of So-and-so, the assistant.

Mr. BURGESS, who also supported the motion, said if an order came by post for a medicine, and it was sent out by the errand-hoy, ought the errand-hoy to be registered? As he would hand the medicine to the purchaser, he would in that case be the seller.

The PRESIDENT, in closing the discussion, supported the views which had been expressed.

The resolution was then carried unanimously.

Mr. Woodcock then moved and Mr. A. C. Abraham seconded, a motion that a subscription be opened for the purpose of ensuring an appeal against the decision of the Wandsworth County Court judge. Dr. Symes supported the proposal, saying he felt that in doing so he was not acting in any disloyalty towards the Pharmaceutical Society. The judge who tried the case himself had recommended an appeal from his decision; the defendant, who lost, desired it; and the Council would be glad to have the matter properly argued and decided in a higher court. The resolution was carried unanimously.

Mr. Woodcock then moved and Mr. Parkinson seconded a proposal that two guineas be contributed from the funds of the Association. This was carried.

Dr. Symes said he had reason to believe that the proprietors of THE CHEMIST AND DRUGGIST had offered 10l. towards a fund for appealing in this case, and Mr. Willing said Messrs. Evans, Sons & Co. would contribute five guineas. Other members present promised to contribute.

BISMUTH HAIR DYE.

WE printed a formula for this hair dye some years ago, but it did not give the satisfaction which was anticipated. A writer in the *Druggists' Bulletin* states that the following produces a satisfactory preparation:—

No. 1.

Bismuth subnitrate	..	..	..	200 grains
Water	..	..	..	2 oz.
Nitric acid	..	..	..	420 grains, or q s.

Use heat to effect solution.

No. 2.

Tartaric acid	..	..	..	150 grains
Sodium bicarbonate	..	..	..	163 ..
Water	..	..	..	32 oz.

When effervescence of the latter has ceased, mix the cold liquids by pouring No. 1 into No. 2, with constant stirring. Allow the precipitate to subside, transfer it to a filter or a strainer, and wash with water until free from the sodium nitrate formed, as this salt would be an unnecessary impediment to the operation of the dye. Now allow the magma to drain until its weight is reduced to at least 4 oz. This can be readily determined without removing it from the filter and funnel if both have been previously weighed. Transfer the magma, which consists of bismuth tartrate, to a dish, and dissolve it by the addition of sufficient liq. ammon. fort.

Next dissolve 100 grains of sodium hyposulphite in 3 oz. of water, and mix the two liquids. The total volume of the product should be about 7 or 8 oz., which would make the solution contain about 10 per cent. of bismuth tartrate, the product from above quantities being nearly 300 grains. The addition of 1 oz. of glycerine is calculated to make it more effective in colouring the hair, as this ingredient prevents entire drying up of the constituents, and thus favours a continuation of the decomposition.

Should it be desired to produce a jet black, this may be accomplished (after the dye given above has first been applied and allowed to dry) by the application of a solution of an alkaline sulphide or sulphuret. It is not necessary that the latter salt should be absolutely pure, as the commercial sulphuret of potassium answers well if fresh or undecomposed. The application of these dyes and mordants is usually made by means of a toothbrush and comb, so as to avoid staining the scalp.

Legal Reports.

ENGAGING AN ASSISTANT.

AT Welshpool County Court on November 13, before Judge Bishop, Mr. Hollowell, chemist's assistant, sued Mr. Moses, chemist, of Shrewsbury and Welshpool, for the recovery of 17*l.* 8*s.* 11*d.*, balance of wages due. From the evidence of the plaintiff and a witness, Mrs. Mary Ann Haddon, it appeared that in September last the plaintiff was lodging with the lady named at Sheffield, where he was temporarily engaged as an assistant to a chemist, and on December 31, 1888, he received a letter from Mr. Moses offering him the situation of manager of his shop at Welshpool at a salary of 25*s.* per week. Plaintiff answered the letter the same day, stating that he could not take less than 30*s.*, and the day following he received a telegram—"Come to-morrow as early as possible." The defendant denied having had any correspondence with the plaintiff before December 25, 1888. He received, he said, a week's notice from his manager at Welshpool on December 23, and applied to a Birmingham agency to recommend him a suitable person, the result being that he received the name of Mr. Hollowell, to whom he wrote on Christmas Day, and received an answer on the Thursday following asking for 30*s.* per week, and saying that he would come on the following Monday. He replied that he should not give more than 25*s.*, as he had never paid more than that. To his surprise, however, the plaintiff walked into his shop on Friday the 28th. Defendant totally denied that he had ever sent any telegram, saying that there was no need to do so, as his former manager did not leave until the following Monday. He could swear positively that he sent no telegram whatever. His honour said he did not think that either the plaintiff or the defendant had come there with the intention of telling a deliberate lie, and there must be a mistake somewhere. As the plaintiff's evidence was corroborated, however, he should give a verdict for him for the full amount claimed, with costs.

A LAC-DYE DISPUTE.

IN the City of London Court, before Mr. Commissioner Kerr, on November 15, Messrs. Quiney Brothers, indigo merchants, of 10 Mincing Lane, E.C., sued to recover the sum of 7*l.* 5*s.* 2*d.* from Mr. Henry Lafone, proprietor of Butler's Wharf, for damages for the wrongful conversion of four chests of lac-dye.

Mr. Powell appeared for the plaintiffs, and Mr. Piele for the defendant.

Mr. Powell said the four chests, with many others, were deposited at Butler's Wharf many years ago. Lac-dye had been superseded for most practical and commercial purposes, and its place had been taken by aniline dyes. Consequently the chests were kept much longer in bond than would otherwise have been the case. The defendant agreed to charge a rent at the rate of 7½*d.* per ton per week.

Mr. Piele said the first question which the Court would have to consider was whether the plaintiff was entitled to the goods at all. Further, he would be able to show that they did not convert the goods at all as alleged.

Mr. Commissioner Kerr observed that if there had been no conversion of the lac-dyes there would be an end of the matter.

Mr. Powell, continuing, said the defendant took it into his head in April, 1885, to destroy all the lac-dye he had then in his place. An action was brought by some of the owners of that lac-dye, and the plaintiff was a witness. It was then stated by the defendant that he had destroyed the goods. The plaintiffs had found warrants for 66 chests, and presented them to the defendant for delivery of the goods. The plaintiffs were then paid at the rate of 3*d.* per lb. on 54 of the chests, and the others, being found, were handed over to him. The plaintiffs thought there the matter ended. In the course of their business they received orders for some more lac-dyes. A search was made, and then they found four more warrants. That was in January of this year. They sent them to the defendant, and asked him for delivery of the dyes. A receipt was given for the warrants, but they were afterwards re-

turned marked "Cancelled." That, of course, had been done by the defendant. The plaintiffs wrote and said as the warrants had been cancelled they presumed they had been irregularly dealt with. By this they meant they supposed the defendant had destroyed the goods in the same manner as the previous lot. They therefore sent in their claim on the same basis as the previous settlement. To this they received a most extraordinary reply, in which the defendant said he regarded the claim as a joke. They told the defendant they did not understand what he meant, and they wanted delivery of the dyes, as one of their customers was particularly anxious to have the same special brand as he had been in the habit of receiving for some years past.

Mr. Piele said the lac-dyes were entered in the warehouse as far back as March, 1870, and the warrants in question were not issued by the defendant, as he was not then the proprietor of Butler's Wharf. They were issued by Brander Brothers. How the plaintiffs had become possessed of the warrants they did not know, as the warrants bore the name of Messrs. Tamvaco & Co. The warrants required endorsing, too, so the plaintiffs' title must fail.

The plaintiff, Mr. Quiney, was then called, and said the endorsement was that of Tamvaco & Co. He had been thirty-seven years in the chemical business, and had had thousands of documents of that description pass through his hands. In Mincing Lane all documents were endorsed as these were.

Mr. Lafone was called to speak to the endorsement, and he and his ledger-clerk said the signature was that of Messrs. Tamvaco & Co.

Mr. Commissioner Kerr said the point as to the endorsement had therefore gone.

Mr. Piele said he should now urge that the lac-dyes were never converted by the defendant at all. His client informed him that this particular dye was valueless. It had been left at the wharf eighteen years.

The plaintiff, in cross-examination, said lac-dye did not deteriorate by keeping. The brands known as "R. B." and "A. B." were quite as good as "C. J. S." They were all worth about 3*d.* per lb. The market was very limited. He had had a settlement with the defendant already, and had been paid 3*d.* per lb. in respect of some of the chests.

Mr. Commissioner Kerr (to Mr. Piele): Then how can you say this is good for nothing if you have already paid 3*d.* per lb. for it?

Mr. Piele: The brand we settled for then was "D. T.," which is very much superior to this.

The plaintiff: "D. T." is the same. I first obtained these warrants about 1880. I may have given 6*d.* per lb. for some of this. That was the value in 1880. I have paid 6*d.* per lb. for 1,000 chests of lac-dye in 1880. I did not get the warrants from Tamvaco. In 1876 I declined to pay the rent, because I did not think the goods were worth the charges.

Mr. Commissioner Kerr suggested that the present value of the lac-dye could be ascertained by putting it up for auction.

Mr. Piele said they could not do that as they had not got it.

The plaintiff further said he was told the defendant took over all the liabilities of the previous owner when he bought the wharf.

Mr. Commissioner Kerr said it was a case of great hardship for the defendant. It was a case which might have been settled by any chemist or druggist very quickly.

Mr. Piele said they were willing to agree the value of the lac-dye at 3*d.* per lb., providing the defendant had credit for the rent he was entitled to up to the time of demand. They had lost 6,000*l.* over lac-dye.

Mr. Commissioner Kerr thought the suggestion a reasonable one, in which Mr. Powell concurred.

Judgment was accordingly entered for the plaintiffs for 11*l.* 17*s.* 6*d.*, and for the defendant for 8*l.* 7*s.* 3*d.* Mr. Commissioner Kerr said he thought no costs should be allowed on either side.

PROFESSOR THORPE, F.R.S., director of the chemical laboratories of the School of Mines, has been awarded by the Royal Society a royal medal for his researches on fluorine compounds and his work on the atomic weights of gold and titanium.

BANKRUPTCY REPORTS.

Re EDWARD LLOYD, Keelings Lane, Northwood, Staffordshire, Chemist, &c.

THE first meeting of the creditors concerned in this case was held on November 15 at the Official Receiver's office, Newcastle-under-Lyme, when Mr. Huntback represented the debtor, and Mr. W. Dobbie the creditors. The statement of affairs shows:—Liabilities and unsecured creditors, 243*l.* 14*s.* 1*d.*; Assets: Stock in trade, 60*l.*, to produce 30*l.*; fixtures and fittings, 5*l.*, to produce 2*l.*; furniture, 15*l.*, to produce 6*l.*; book debts, 4*l.* 13*s.* 10*d.*; surplus from creditors fully secured, 96*l.*; total, 138*l.* 13*s.* 10*d.*, less preferential creditors, 2*l.* 16*s.* 3*d.*; leaving a deficiency of 107*l.* 16*s.* 6*d.* The causes of failure are "want of capital and bad trade." The Official Receiver observes the receiving order was made on the debtor's own petition, and he was adjudged a bankrupt. He states that he commenced business as a chemist and druggist in Oldham Road, Manchester, about sixteen years ago, with a capital of 50*l.* In 1877 or 1878 he filed a petition for liquidation of his affairs, and obtained his discharge. He subsequently took a situation, and about six years ago he went into business at Keelings Lane, Northwood. To enable him to do this he borrowed 40*l.* from his wife, which sum is still owing. There are twenty-six creditors, eight being for amounts over 10*l.* The fully-secured creditor is the North Stafford Permanent Building and Investment Society, Hanley, the security held being a mortgage of the bankrupt's shop and premises. The bankrupt has kept an account of his receipts and payments, and of the goods sold on credit. The principal creditors are:—

	£	s.	d.
De Bemegard, Mrs., Hanley	28	5	9
Dobbie & Mason, Manchester	62	2	0
Gibbs, Cuxson & Co., Wednesbury	10	1	6
Goodall, Backhouse & Co., Leeds	14	19	4
Mathews & Co., Liverpool	38	17	5
Yates, S., Manchester	11	12	0

The Official Receiver was requested by the creditors to have a valuation made of the estate with a view of having it disposed of.

Re JOHN ROBERT EVANS, The Pharmacy, Vale Street, Denbigh, Chemist and Druggist.

THE first meeting of the creditors in this case was held at Chester on November 18, when a statement of affairs was submitted, which showed:—Liabilities to unsecured creditors, 583*l.* 0*s.* 9*d.*, against assets—stock in trade, estimated cost 190*l.*; furniture, estimated cost 90*l.*, together estimated to produce 180*l.*; good book debts, 12*l.* 1*s.* 10*d.*; total, 192*l.* 1*s.* 10*d.*; less preferential creditors for rates, &c., 3*l.* 12*s.*, and for rent 11*l.* 5*s.*, leaving the net assets at 177*l.* 4*s.* 10*d.* The alleged causes of failure are slackness of trade, legal expenses, and no capital in starting business. The Official Receiver observes the receiving order was made on the debtor's own petition, and he has been adjudged a bankrupt. The debtor states that he has carried on business at 31 Vale Street, Denbigh, for about three and a half years, and for three years previously at St. Peter's, Kent, and that he has kept a ledger, cash-book, invoice-book, and day-book, which are posted up to date. The debtor intends offering a composition of 5*s.* in the pound, payable on January 1, 1890, and March 1, 1890. No valuation has yet been made of the debtor's stock-in-trade and furniture. The debtor made an assignment for the benefit of his creditors about four years ago, under which, he states, a dividend of 7*s.* 6*d.* in the pound was paid. He states he first became aware of his insolvency about six months ago, since which time he has contracted several debts, but adds that he "had an expectation of obtaining work from a firm, which was promised me every fortnight, by which I should have obtained 33*l.* profit." From the debtor's deficiency account it would appear that he has made a profit of 20*l.* per annum from his business for the last three years. The deficiency account shows besides a sum of 80*l.* profit on premiums from apprentices. The debtor returns his household expenses of self, wife, child, and two apprentices and servant at an average 35*s.* per week.

No creditors attended the meeting, and, therefore, the debtor's scheme of composition could not be carried. The matter remains in the hands of the Official Receiver. The principal creditors are:—

	£	s.	d.
Clay, Dodd & Co., Liverpool	17	0	0
Evans, R., Chester	41	0	0
Hobday & Son, Manchester	27	11	8
Lloyd, A., St. Asaph	30	0	0
Sanger & Son, Oxford Street, W.	23	0	0
Singleton & Co., Liverpool	15	0	0

Re THOMAS B. TYSON, late of 21 Montague Street, Worthing, Pharmaceutical Chemist.

THE first meeting of creditors under this failure was held at the London Bankruptcy Buildings on Tuesday last, before Mr. Mackintosh, the Official Receiver for the Brighton district. The chairman, in opening the proceedings, said the debtor had absconded in August last, and no accounts had, therefore, been filed. The receiving order was made on October 29 upon the petition of Messrs. Shelvey & Co., of Brighton, who were creditors for 101*l.* 7*s.* 10*d.*, the act of bankruptcy alleged being the departure of the debtor from his dwelling-place with intent to defeat and delay his creditors. Proofs had been received from the following:—

Chemists' Mineral Waters Association, Caledonian Road, N.	£	s.	d.
Cleaver, F. S., & Sons, Red Lion Street, Holborn	14	13	5
Mason, H. C., & Co., Australian Avenue, E.C.	33	0	7
Maw, S., Son & Thompson, Aldersgate Street	13	10	5
Newbery, F., & Son, Newgate Street	82	13	7
Rimmel, E., 93 Strand	18	0	0
Shelvey & Co., Brighton	101	7	10
Sutton, Carden & Co., Hill Street, E.C.	17	12	3
Tyson, John	1,262	0	0

and several others for small amounts.

The chairman said an adjudication order had been made, and under that he was the appointed trustee until the first meeting had been held. He was in treaty for the sale of the business, and therefore suggested that the meeting should not pass any resolutions, but leave the matter in his hands to be arranged. By so doing some expense would be saved to the estate, as he would endeavour to avoid entering into litigation, of which there seemed some probability. The claim of Mr. Tyson, sen., had to be dealt with before anything could be settled, and when that had been done he would ask three of the principal creditors to meet him either in London or Brighton and give their opinions as to what ought to be done. As a preliminary step he was going to have the business valued by a special valuer. From what he had already ascertained the business had apparently commenced at 15*l.* a week, and at the end of the three years' trading had gone up to a weekly sum of 40*l.* That being so, it ought to be worth a good sum, and that matter would receive very careful attention. With reference to Mr. Tyson, sen., that gentleman took possession of the premises last August under a judgment, and afterwards got a judge's order to sell the things to himself. The business had been closed since August, owing to the action of Mr. Tyson, sen., and the stock, &c., was still upon the premises, but was claimed by that gentleman under the judge's order. On the other hand, he (the chairman) claimed that an act of bankruptcy had been committed before that order was made, and that he was therefore entitled to possession under the bankruptcy proceedings.

Mr. Turner said he was instructed to attend by Mr. Tyson, sen., and would like to address the meeting.

The Chairman: Certainly; it is only fair the creditors should hear both sides of the question.

Mr. Turner said the bankrupt got into bad habits, the result being a difficulty and the consequent absence of the bankrupt, who went away in order to follow the bent of his inclinations. The father had originally bought the place and let it on lease to the bankrupt. He also bought the whole of the stock, and naturally felt a certain amount of interest in the business. Seeing how things were going on, his client determined to bring them to an end, and therefore gave instructions for the son to be sued upon the bills given in payment of the debt. Judgment was obtained and pcs-

session taken of the premises, upon which the bankrupt left. Mr. Tyson, sen., under a judge's order, then purchased the business, and desired to distribute the proceeds among the whole of the creditors, putting his own claim against the estate upon the same footing as the others. Having regard to the fact that Mr. Tyson, sen., had bought the stock and fixtures in the first instance, he (Mr. Turner) looked upon the proposal as a most honourable one. If the matter could be amicably settled he would be pleased to make reasonable terms, but, on the other hand, he considered they had a good case, and, if necessary, would fight it out.

The creditors, after some discussion, decided to leave the matter in the hands of the Official Receiver, with a view to a settlement being arrived at between the court and Mr. Tyson, sen. No resolutions, therefore, were proposed. The public examination of the bankrupt is appointed for Nov. 28, at a sitting of the court at Brighton.

CHEMICAL LABOURERS.

LABOUR questions are coming prominently to the front in the chemical as in other industries. As the result of negotiations which have been going on at Northwich for some weeks past between the Amalgamated Society of Salt-workers, Alkali-workers, Mechanics, and General Labourers and Brunner, Mond & Co. (Limited), very favourable conditions for the men have been conceded. The operations, which it is necessary to keep going night and day, have hitherto been carried on by two shifts of eleven hours and thirteen hours each, with a double shift of twenty-three or twenty-four hours to change the men from night to day work. The men asked that, instead of this, the work should be done in three shifts of eight hours each; but the difficulty lay in the fact that this involved the employment of more hands and less wages for the individual worker. A satisfactory compromise has, however, been arrived at, by which, working three shifts of eight hours each, the men who got 4s. for the long shift will now get 3s. 9d. for the short one, and the men who got 3s. 9d. for the long shift will now get 3s. 6d. for the short one, the gain to the men being a reduction of from three to five hours in the shift, while the wages are only reduced by 3d. per shift in each case. A great advantage has also been gained in arranging the double shift, which is to be one of sixteen hours about every three weeks. The new scheme, which will entail the employment of 300 more hands, is now in operation.

A St. Helens chemical worker, after reading Mr. Gladstone's speech to the working men of Saltney, wrote to the right hon. gentleman with regard to the working hours of chemical workers in St. Helens and district. It was pointed out that 168 hours per fortnight was the average time. One week 112 hours were made, and the next week 56, and very frequently twenty-four hours were worked at a stretch. The correspondent pointed out that there were no Sunday holidays, and that for twelve years he had not had the pleasure of enjoying one single New Year's Day, Christmas Day, or Good Friday in the midst of his family. This he termed "one eternal round of drudgery." He contends that there should be three shifts of eight hours each in the twenty-four, which would be fifty-six in the week, reckoning Sunday, whereas at present there are only two, making eighty-four hours per week.

The following reply was received from Mr. Gladstone, dated November 16:—

Dear Sir,—I have been sadly and painfully impressed by the facts set out so clearly in your letter, and I shall keep it by me for further reflection. I did not know that in trades of such a class such cases were possible.—Believe me, your sincere well-wisher,

W. E. GLADSTONE.

A meeting of St. Helens chemical labourers was held on Sunday in Fletcher's coachhouse, near the station. About 500 persons were present. The formation of a local Chemical Labourers' Union was the chief topic. Mr. P. J. King, the Irish League organiser, stated that the union was making good progress, and that 113 new members had been enrolled during the week. A draft copy of the rules was submitted, and the adoption thereof postponed to a future meeting.

Gazette.

PARTNERSHIPS DISSOLVED.

Corbett & Wyatt, Stourbridge, chemists and wholesale and retail druggists.

Miller & Dalton, Amhurst Road and Bethune Road, Stoke Newington, surgeons and accoucheurs.

Nason & Hammond, Nuneaton, physicians, surgeons, apothecaries, and accoucheurs.

Pocock & Oakley, Irliton Road, practitioners of medicine, surgery, and midwifery.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

Lecoffre, Abraham (trading as E. Rimmel), Foxberry Road, Brockley, late of Queen Victoria Street, City, perfumer.

ADJUDICATION.

Morgan, John Morris (trading as the Ynysddu Chemical Company), Machen Upper and Ynysddu, manufacturing chemist.

NOTICE OF DIVIDEND.

Hey, John, Wolsingham, chemist and tea dealer—first and final div. of 3s. 1½d., Nov. 18, Official Receiver's office, Sunderland.

FIRST MEETING AND PUBLIC EXAMINATION.

Rogers, Harry Cornelius Edwin, Birmingham, physician and surgeon—Nov. 28, 25 Colmore Row, Birmingham; Dec. 18, County Court, Birmingham.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act, making any of these arrangements binding upon dissenting creditors.

Tordoff, Hardy, 30 St. Paul's Street, Leeds, surgeon. Trustee: Frank Fletcher, Commerce Chambers, 3 Park Lane, Leeds. Date, Nov. 13; filed, Nov. 18; unsecured liabilities, 741l. 17s. 1d.; estimated net assets, 559l. 3s. 6d.; creditors fully secured, 674l. 10s. Deed of assignment and inspectorship with a view to pay creditors in full by three equal instalments of six, twelve, and eighteen months from Dec. 1, 1889.

	£	s.	d.
Beetham, M., Leeds	11	5	0
Briggs, J., jun., Leeds	14	0	0
Brooksband, E., Tadcaster	10	1	0
Brown, Dr., Bradford	35	0	0
Clarke, Bleasdale & Co., York	29	0	0
Ferris & Co., Bradford	30	0	0
Greenough & Clarkson, Bradford	42	0	0
Greenough, Hy., Wibsey	100	0	0
Headingley & Woodhouse, Leeds	650	0	0
Lancaster, M., Tadcaster	17	10	0
Mutual Deposit Bank, Leeds	35	5	0
Tordoff, A., Wibsey	240	0	0
Walls & Co., York	14	0	0
Wolfe, J., Leeds	13	12	0
Yorkshire Discount Company, York	18	18	0

It is reported that Dr. A. Voelcker, chemist to the Royal Agricultural Society, will shortly proceed to India, under commission from Lord Cross, to study there the best scientific methods for improving the agriculture of that country. Dr. Voelcker will spend a year in travelling through India, he having obtained that leave of absence from the Royal Agricultural Society. The selection was made, it is stated, by Sir James Caird.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

FINANCIAL RESULTS OF THE EXPOSITION.—According to official reports the balance-sheet of the enterprise may be said to be as follows:—

	Francs
The Crédit Foncier's payment for issuing the 30 million tickets	21,500,000
Concessions and various receipts	2,000,000
Estimated value of old materials	1,000,000
Subventions (City of Paris 7 millions, Government 12 millions)	25,000,000
Total	49,500,000
Expenses	41,500,000
Balance	8,000,000

According to law the balance is to accrue to the State. As the sum paid by the Crédit Foncier was net cash, and it has assumed the burden of paying the prizes and redeeming the ticket-bonds, no further liability rests on the Government. Apart from the subventions, therefore, there appears a net loss on the enterprise of 17,000,000 francs.

ILLEGAL PRACTICE OF MEDICINE AND PHARMACY.—Dr. James Henry Nicholson and MM. Jervera Geimberg and Oberkoff Seton were summoned, on November 8, before the Seine Correctional Tribunal on a charge of illegal practice. Dr. Nicholson, a celebrated ear-doctor—if his circulars are to be credited—resides usually in London. But at No. 4 Rue Drouot, where handbills directed deaf patients to apply if they wished to recover hearing, Jervera Geimberg would give medical advice, and insert the wonderful ear-drums made of silver and gilt silver; while Seton would dispense various lotions and powders to complete the treatment. The preparations sold at 5f. a bottle, and drums at 56f. and 63f., ready applied by Geimberg. Somehow patients got dissatisfied, or perhaps the jealousy of French physicians was aroused, and the trio were prosecuted. In court experts testified that the insertion of artificial ear-drums is a delicate process requiring a skilful hand, that the lotions dispensed were pharmaceutical preparations, and that none of the respondents had any French diploma. The court, holding the charges proved, sentenced Geimberg for illegal practice of medicine, Seton for illegal practice of pharmacy, and Dr. Nicholson for complicity in the same, to 500f. fine each.

DR. QUESNEVILLE (GUSTAVE-AUGUSTIN), born in Paris on January 1, 1810, died in the same city on November 14, 1889. Deceased, who was a favourite pupil of Vauquelin and Chevreul, at first studied medicine, and took the degree of doctor in 1834, but soon returned to chemistry, his father's profession, and succeeded to Vauquelin in his chemical manufactory, at a time when chemistry and pharmacy were terms almost synonymous. His contributions to science generally consisted of short and practical notes, among which may be noted those on the analytical separation of iron and manganese; preparation of binoxide of barium, of pure oxide of cobalt, of volatile chlorides, and of oxide of uranium without ammonia carbonate; combinations of chromic acid and silica; bismuth in large crystals; and medical uses of oxygenated water. But the principal work of Dr. Quesneville was his publication of the *Moniteur Scientifique*, an important monthly especially devoted to chemistry, theoretical and applied. The periodical, whose editor, publisher, and manager he was at the same time, first appeared in 1840 under the name of *Revue Scientifique*, and in 1857 changed its name to the present one. About a fortnight before his death he gathered together all his co-labourers in a banquet to celebrate the *Moniteur's* half-centenary, and there announced that it was his intention to cease publishing the paper with the current year. Feeling unequal to further efforts, and unwilling to see the work of his life pass into strange hands, he preferred to stop while he still had it within his power. Consequently the November number of the paper was headed with a notice advising the readers that the December issue would be the last published, and requesting subscribers not to send money for further subscriptions. Dr. Quesneville had the reputation of being very independent and a little peculiar—an appreciation

apparently borne out by his determination to sacrifice to an idea the goodwill, no doubt valuable, of a long-established publication. It may be interesting to add that his son, Dr. Georges Quesneville, is an *agrégé* (fellow) of the Paris College of Pharmacy for physics, chemistry, and toxicology.

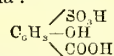
GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

THE GERMAN PHARMACOPŒIA.—It has now been decided that the new German Pharmacopœia shall be printed in the vernacular, the headings only to be Latin.

HYGIENE has become such an important branch of education that at many universities it has its special professors and institute. A new building for teaching this subject is to be erected in connection with Heidelberg University.

A NEW RE-AGENT TO DETECT ALBUMEN, even in infinitesimal quantities, is said to exist in salicylsulphonic acid, a body formed by the action of sulphuric acid on salicylic acid, having the formula:



It will indicate as little as $\frac{1}{120}$ grain of albumen in 10 c.c. of urine, making the urine turbid, but not affecting the other constituents, sugar, peptone, &c.

PRIZES for scientific essays are rare in Germany, and are consequently highly esteemed. There is one specially valued, known as the "Hagen-Bucholz" medal, which is open for the competition of chemists' assistants only. The subject this year was the detection of arsenic, and the judges, comprising some of the most famous scientists and pharmacists of the Empire, have just published their decision. The first prize was awarded to Herr Kwasnik, Herr Heyl, who had previously distinguished himself by gaining a prize at the end of his apprenticeship, running him very close, and coming in a good second.

MUNICH BEER has a world-wide reputation, and though endless attempts have been made to imitate it, the inherent flavour has never been obtained. Brewers have examined the vast breweries, taking notes of every little detail, and have followed the working in every way, but without success, and they have generally come to the conclusion that the true beverage could not be made outside the Bavarian capital. When the third Napoleon failed to make Roquefort cheese at Paris it was stated that the special excellence of the cheese was due to fungi, which only attained perfection in the atmosphere of the rock caves of Cambelon, where that cheese is prepared, and that the failure was due to the unsuccessful attempt to imitate at Paris the climatic conditions of the caves. It is now generally supposed that the superiority of Munich beer is similarly due to the peculiar climatic conditions of that city, and that there alone the *Saccharomyces cerevisiae* reaches its greatest development and attains perfection.

A NEW ANTISEPTIC called Rotterine has been in use for some time past, and seems to have a future before it. The belief has been steadily gaining ground in Germany that a good antiseptic effect may be obtained by mixing a number of very small quantities of various antiseptics, such slight amounts being taken of each that they would singly have no effect, although their combined action is very intense. Similar results have been obtained in the case of creolin, which consists of a mixture of different hydrocarbons in minute quantities; and the Sanitas preparations are also based on this theory. Rotterine owes its name to its originator, Dr. Rotter, and is composed as follows:—45 grains each chloride and sulphocarbolate of zinc, 27 grains boric acid, 2½ grains chloride of sodium, 6 grains salicylic acid, 1 grain each citric acid and thymol. The whole dissolved in a pint of water. The various ingredients are about a tenth of the strength they would require to be to act alone, but thus combined are said to exert an astonishing antiseptic influence, being more effective than a 1 in 1,000 solution of corrosive sublimate. The solution is non-poisonous. It has the advantage of cheapness, and also that the mixture can be pressed into tablets for carrying about.

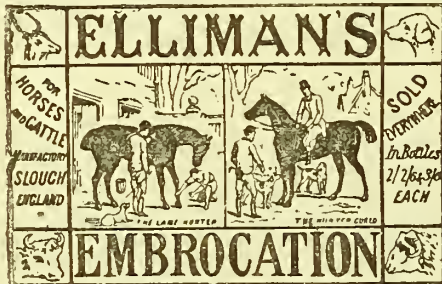
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See First Page, facing inside of front of Cover, in the
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See page advertisement
 first issue of the month

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The APOLLINARIS COMPANY (LIMITED), London, beg to
 announce that, as numerous Aperient Waters are offered to
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 WATER so long imported by them, they have now adopted
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PURE CRUSHED LINSEED IS NOW
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 See advertisement, page 59.

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The Best and Largest Assortment to select from.

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EDITORIAL NOTES.

THE UNQUALIFIED SELLER OF
 POISONS.

THE interpretation of the reference in the Pharmacy Act to
 the person who sells scheduled poisons is still exercising the
 intelligence of chemists throughout the country, and our
 correspondence section yields evidence that this individual
 is at this moment the prominent object in the pharma-
 ceutical perspective. The letters we publish will be found,
 we think, to fairly represent both arguments in the contro-
 versy, and these, together with the reports of discussions at
 Sheffield last week and at Liverpool and Edinburgh this
 week, ought to enable all persons concerned to make up
 their minds as to the points at issue. We do not intend to
 repeat here the details of the discussion, and the main purpose
 of this note is to emphasise the intimation given in Mr. Read's
 letter to those who wish to adopt the County Court judge's
 advice, and have the case fully argued in a higher court.
 There is, as Mr. Read says, no time to lose. Notice of appeal

must be given within twenty-one days of the judgment, and we have ascertained that the defendants would be disposed to give this notice if in the early days of next week we can inform them that a sum of about one hundred pounds is promised towards the expenses. We support the judgment as it stands, but we recognise the importance of the question at issue, and would like to see it fully argued out; and to bring matters to a focus we start a guarantee fund with a promise of 10%. Mr. Read offers a guinea, seven guineas are forthcoming from Liverpool, and some other correspondents indicate their willingness to contribute. If there is to be any practical issue of this discussion those who wish for a further fight must intimate to us definitely and promptly what they are willing to pay.

Some of the letters we publish suggest a few words of comment. The best point made, we think, by those who dispute Judge Holroyd's decision is that which appears in the letters of Dr. Symes, "H," and others. They say, in effect, if the legislature meant by the 15th section to prevent unregistered persons selling poisons, how came they in the 17th section to apparently recognise sales by "apprentices and servants"? the former being almost necessarily unqualified. The opposition must have the credit of the point, though it may be remarked that the sales contemplated by the 17th section by an apprentice do not exclude the idea of a superior and qualified person over him superintending and conducting the sale, as required by the 15th section. But Dr. Symes is not justified in availing himself of this almost accidental and certainly not conclusive insertion of the word apprentice in the 17th section, and dismissing inconvenient words in the 15th section as mere tautology.

Mr. C. C. Bell makes an ingenious analysis of the 15th section, grouping the offences into five distinct ones. But we do not quite catch the point of his argument. To make it effective for his purpose it seems to us that he must maintain that a person must commit the whole of one of his five offences (or group of offences) before he can be convicted. Take his third for example. Must a person call himself pharmaceutical chemist, pharmacist, and pharmacist before he can be successfully sued? Evidently not. We agree with Mr. Bell that his second offence (or group of offences) should be read in the same way as the first group is read. That is, any person who shall take (*i.e.* adopt), any person who shall use, any person who shall exhibit, &c. So, in the first group, any person who shall sell, or any person who shall keep open shop for, &c., is liable. This corresponds with other Acts (the Medicine Stamp Acts, for instance) which make it an offence to sell or expose for sale under certain conditions. We do not find any words in the Act to justify Mr. Bell's assumption that the selling means selling in some other place than an open shop. It includes selling off a barrow, no doubt; but it includes (we think) all other selling besides.

"Anglo-Irish" aims to reduce the section to the absurd by suggesting hypothetical cases of the sale of poison, in which qualified and unqualified persons divide the labour of selling. Mr. Justice Grove answered these possibilities in the careful judgment he gave in the case of *Templeman v. Trafford*, in the Queen's Bench Division of the High Court, which will be found reported in this journal of December 15, 1881. Mr. Justice Grove laid down, in effect, that the qualified person must be "on the spot and control the sale," though "it might not be necessary that his hand should be the hand that sells the poison." "Anglo-Irish" can himself apply that piece of information to the cases he submits, and settle them to his own satisfaction.

To "Assistant," who asks whether he, with twenty-four years' experience, is not as competent to sell as the legally

qualified youth of 21 or 22 years of age, it is only possible to answer that that is not the question. We are at present concerned with what the law actually says, not with what it ought to say.

The letter signed "Nux" expresses with such force and clearness the views of those who argue that it is to the direct interest of chemists that the law as now interpreted should be enforced with discretion, but without hesitation, in flagrant cases, that we direct to it the special attention of our critics. "Nux" does not discuss the interpretation of the law; he assumes that the judges generally are correct; but he aims to show that chemists have everything to gain by the establishment of this principle. This, although it is not the question generally dealt with, which is the actual meaning of the section, is, after all, the consideration of practical importance, and "Nux's" arguments are worthy of careful thought.

WHAT IS TRUE STROPHANTHUS?

IN our market report of last week we referred to the offer at the drug auctions of a large parcel of a drug classified in the catalogue as "strophanthus seed," but which we characterised as being *Holarrhena*, of which a number of consignments have been seen in the market lately, and which is now known to be useless in this country for medicinal purposes. The impression that this was another parcel of *holarrhena* caused us to describe the consignment as "practically worthless." This paragraph has brought us a remonstrance from the firm who are charged with the sale of the parcel on behalf of the importers, and we are requested to contradict the statement that the seeds are valueless, on the very sufficient ground that about 1,000 lbs. of the lot have actually been sold at 2s. per lb., and another portion at 1s. 9d. per lb. This is certainly convincing proof of the value of the seeds to the importers, though, of course, the fact that a buyer may be found who is willing to pay a certain price for an article does not establish its intrinsic value. The representations made to us have led us to subject the seeds to a thorough examination and to make an excursion into the tangled maze of recent literature on the characteristics and comparative values of the strophanthus of commerce, with the result that we are bound to qualify the paragraph in our trade report. First, we have to admit that the seeds in question are not *holarrhena* seeds, though they certainly bear a closer resemblance to these than to any of the true strophanthus hitherto placed in any quantity on the London drug market. The seeds we find to be a mixture of two varieties in the proportion of about 4 to 1. The larger part show a perfectly smooth seed, without the silky hairs which are a characteristic of the true strophanthus, hard, bright brown in colour, and having on one side a grooved line, commencing at about one-third of the length of the seed from the base, and running thence to the top of the seed. The taste also, though bitter, is much less pronounced than that of the true strophanthus. The remainder of the mixture, or about one-fifth of the whole, is identified without difficulty as true strophanthus *hispidus*, though by no means equal to the usual commercial standard. That being the case, our assertion that the seeds are practically worthless, in so far as it was based upon the idea that they were *holarrhena* seeds, falls to the ground, and the fact, already stated, that the selling brokers can get 1s. 9d. to 2s. per lb. for the seeds, fully justifies their assertion, in another sense, that the parcel is anything but worthless. The question of medicinal as distinct from commercial value is not one with which they concern them-

selves. Their business is to secure for their principal the best possible market price for the goods.

But this parcel suggests questions of pharmaceutical and therapeutic interest. A high authority, to whom we submitted a sample of the seeds, declares that they agree as closely as possible with the seeds of *Roupellia grata*—a plant nearly allied to strophanthus—but that, in the absence of pappus—the feathery tuft of the seeds—he cannot identify them more closely. Leaving the question of the seed being *Roupellia* aside for a moment, we remembered that seeds similar to those of the sample were exhibited at the Paris Exhibition by a well-known French dealer in strophanthus, and upon comparing our notes of that exhibit with the sample we came to the conclusion that there is little doubt that the seeds are the glabrous or smooth strophanthus of French commerce, known to French drug houses as “*Strophanthus glabre du Gabon*,” but never before, so far as we are aware, offered for sale in this country on anything like the scale of the present consignment, the part of which offered at the drug sales alone consisted of over 2,500 lbs. The consignment was imported into Liverpool last month from the West Coast of Africa, the port of shipment probably being Gaboon, on the river of that name, situated immediately north of the equator. Gaboon belongs to the French, and this accounts for the fact that hitherto the seed from that quarter has found its way to French ports.

It is well known that what we may call the principal strophanthus seeds of commerce—the long green or greyish-green, silky-haired, intensely bitter drug generally known as Kombé seeds—have for some time been extremely scarce, and are now worth from 14s. to 16s. per lb. in the market. These green Kombé seeds used to come to us mainly, if not exclusively, from the Shiré plateau in the lake district of South-eastern Africa, whence they generally found their way down the Shiré and Zambesi rivers to the coast. That source of supply has almost dried up since last year, though the pinch was not much felt until quite recently, as there had been an enormous over-supply, and the second-hand holders were able to fill the requirements of the trade for a long while after the direct imports had fallen off. Leaving France out of account for the moment, this green strophanthus is practically the only kind concerning the physiological action of which reports have been published by the eminent medical investigators who have created the reputation of the drug. To it consequently our present state of knowledge of the medicinal properties of the drug may be said to be confined. For this reason, no doubt, the new Austrian Pharmacopœia the only European standard work of that kind in which the drug strophanthus has been incorporated, distinctly rejects all varieties of the drug except the aforesaid Kombé seed, from which alone the tincture official in this Pharmacopœia, may be prepared. This is a fact which must tell strongly against the value of the seed now under discussion, though of course it does not *per se* prove the latter to be valueless. But there are further points to be considered: The strophanthin isolated from the Kombé and hispidus seeds appears in an amorphous condition (Professor Fraser being the only one who has succeeded in obtaining it crystalline, although that is a little uncertain), while from the glabrous Gaboon seeds an active principle, strophanthin, is easily obtainable in a crystalline form. Strophanthin, however, is not at present an article of commercial interest at all, but only a chemical curiosity, occasionally met with at exhibitions or in museums, and so far of little practical utility, though it is admitted to be an exceedingly active agent. In medicine strophanthus is used exclusively as a tincture prepared from the seed direct, and all our knowledge with regard to

doses, activity, &c., is based upon the use of this tincture. Of the medicinal action of strophanthin, on the other hand, no sufficient data have been given to justify its employment, and its administration, therefore, must at present be regarded as inadmissible.

But, as already pointed out, the consignment under consideration consists of two kinds of seeds mixed, viz., about 20 per cent. of true strophanthus hispidus seeds, which might be used for tincture-making, and 80 per cent. of what we will call Gaboon seed, of which no tincture could be made. The presence of the true seeds would prevent the preparation of crystalline strophanthin from the whole, and the only manner in which to make the seeds commercially valuable for the English market would, therefore, be to pick them, which would be so difficult as to be practically impossible.

The classification and investigation of the different varieties of strophanthus is still very chaotic, and will probably remain so until tropical Africa shall have become opened up to commerce sufficiently to enable us to draw regular supplies of the seeds from the ports which are most conveniently situated to the districts where the plants are found, and until we are able to obtain, along with drugs from that quarter, a satisfactory supply of the flowers and leaves of each species or variety of the plants. But at present it scarcely seems that strophanthus will be able for many years to play so important a part on the drug market as was originally anticipated for it. Its chief use would be in the complaints for which digitalis is now usually administered, and, although it is claimed that strophanthus possesses many advantages which are lacking in the older drug, there is the great drawback that our knowledge of the comparative efficacy of the various kinds of strophanthus is still very incomplete, that the supply is precarious in quantity and uncertain in quality, while digitalis is always likely to be obtainable in sufficient quantities from civilised markets, and that, moreover, digitalis has a record of usefulness established by ages of use. The most valuable kind of strophanthus seed, the bold, silky, green Kombé species, which come to us from the Shiré district, has for a long time been wanting in our markets, and we are now, for such demand as exists, dependent upon the hispidus seed from the African west coast, of which a certain admixture is found in the parcel under notice. It is a curious fact that older samples of this hispidus seed show a slight admixture of the glabrous seeds which form the bulk of the parcel now offered, but the percentage of these glabrous seeds in previous parcels was small, and they have, perhaps, not been noticed in the manufacturing process. It may also be pointed out here that the French scientist, Blondel, in a paper published in the *Journal de Pharmacie et de Chimie* of March 1, 1888, enumerates, among the four principal varieties of strophanthus now known, the Gaboon seeds, which he describes as brown, thin, and perfectly smooth, and also as “remarkably active.” Blondel says that this Gaboon seed is the seed hitherto known wrongfully as hispidus, in which opinion the French investigator probably stands alone. Certainly the smooth Gaboon seeds are not those which are known as hispidus seeds in this country. So far as our present knowledge extends we should think that the strophanthus seeds of commerce are best classified as follows:—First, the two varieties from South-eastern Africa, both produced in the Shiré country and the Zambesi region, both greenish, the one (Kombé) larger and more hairy, the other woolly. These two are commercially the most valuable. Then follow the two varieties from Western Africa, the Niger strophanthus and the hispidus, both slightly hairy, browner, and rather smaller than the East African; and, finally, the smooth, bright brown “Gaboon”

seeds. We shall be thankful for any further light which may be shed upon this interesting question, and of an explanation of the reason why the two varieties of West African seed should nearly always arrive on our markets intermixed in varying proportions. That the seeds are mixed prior to their shipment from the African port is probable, but it would be interesting to know whether the mixing is accidental or the result of deliberate sophistication.

PHARMACOPŒIA CORRECTIONS.

A CORRESPONDENT asked us recently what the British Pharmacopœia means, under "Tinctura Chloroformi et Morphine," by directing 8 grains of morphine hydrochlorate to be dissolved in an ounce of rectified spirit. It will not dissolve. We replied that, in the reprints of the Pharmacopœia, the word "diffuse" has taken the place of "dissolve." This is not the first correction which we have recently come across accidentally in the reprints. For example, the correct formula of meconic acid is now given; the bottle in which 30 oz. of sulphurous acid is made is no longer, as Professor Atfield pointed out last winter, to be a pint, but a quart bottle. The description originally given of chrysarobin was faulty, and was officially corrected by prefixing to the "Characters and Tests" matter the words printed here in italics—"As purified by solvents it is a light brownish-yellow minutely crystalline powder, tasteless and inodorous." But the corrections have not stopped there. The preceding part of the text stated, in the first instance, that this drug was "the medullary matter . . . dried and powdered," now we have to read "the medullary matter . . . dried, powdered, and purified." Moreover, the "Characters and Tests" paragraph now begins "*Commercial chrysarobin*, as purified by solvents, occurs as a light brownish-yellow," &c. These alterations are perhaps most necessary, although we should have been inclined to say that chrysarobin was "the medullary matter . . . dried, purified, and powdered." It is just possible that there may be more corrections in the reprints than we have now, or previously, noted. It is exceedingly inconvenient to the holders of the first imprints of the Pharmacopœia that alterations, even verbal alterations, should be made in subsequent imprints without official notice. Exactly a year ago to-day we announced that in the reprint published that week synonyms had been added to tincture of opium and compound tincture of camphor. Probably if that announcement had not been made by us users of the Pharmacopœia might never have heard of the matter at all. It seems, therefore, that there ought to be some better arrangement in regard to corrections. It is a tedious thing to search for what has been altered, and much must depend on chance references. We are clearly of opinion that it is the duty of the compilers of the Pharmacopœia to publish a list of corrections when they are made. This is all the more necessary since it has become a better recognised authority in the decision of questions under the Sale of Food and Drugs Act.

COMMENTARY.

A FEW weeks ago we had occasion to criticise a paper by Mr. Rowland Williams on the iodine absorption of essential oils, which had appeared in the *Chemical News*. We then contrasted Mr. Williams's figures with those obtained by Messrs. Barenthin, Davies, and Snow, and repeated an observation made six months previously, that the iodine-absorption test cannot take rank as a means of testing essential oils

until we have perfect uniformity in working it. (See our issue of October 19, page 564.) In a note to the *Chemical News* of last week Mr. R. A. Cripps, F.I.C., adopts the same arguments and the tabular method of contrasting the results of the four investigators with some slight extension, and concludes that "it is evident that the test is practically valueless unless performed under strictly concordant conditions; even then its indications will be of no value until a considerable number of samples of each essential oil have been reported upon." We are obliged to Mr. Cripps for thus supporting our argument, almost in our own words; but we should have better appreciated his co-operation if he had given us the credit which is obviously our due.

THE *British Medical Journal*, alluding to the Wandsworth judgment in regard to the sale of poisons by unqualified persons, says that if the decision stands it "will no doubt involve some inconvenience to owners of shops who do not keep qualified assistants; but the safety of the public will be increased, and probably even the interests of these owners will be served by an accentuation in the eyes of the public of the difference between the skilled and the unskilled dealer. The decision is of considerable importance also to those medical men who keep open shops for the retailing of medicines." This last is an important consideration. Qualified medical practitioners are independent of the Pharmacy Act, but their dispensing grooms, gardeners, and wives are under no legal protection.

DR. NORMAN KERR, who is a prominent member of the board of medical temperance advocates, contributes a paper on "The Taking of Arsenic" to this month's journal of the Society for the Study of Inebriety. The observations he records are sufficiently startling. He has known persons so to habituate themselves to the poison as to be able to take 10 to 15 grains daily and profess to feel better for it. Ladies, he states, swallow arsenic to improve their personal appearance, and also use it externally for the complexion. Gentlemen are also addicted to this practice, and both sexes take doses of arsenic as a fillip and general tonic. Nor is the habit confined to the wealthy. On one occasion, while crossing a ferry, Dr. Kerr saw a boatman rest on his oars and take a drink out of a pocket-flask. The beverage was a preparation of arsenic, and the dose was enough to kill any four average Englishmen. This habit had been indulged in for several years. The object of the paper seems to be to point out how much more moral a poison arsenic is than alcohol. Dr. Kerr doubts whether there is such a thing as arsenical inebriety. He knows of no case of a "criminal being accused of starving his wife and family, or pawning their clothes, in order to gratify his longing for tea, coffee, tobacco, or arsenic." One tea-tippler is known, however, to have committed thefts in order to procure her daily pound of tea. But as an instance of the power of habit Dr. Kerr tells what must be the most astonishing instance on record. The wife of a Baptist minister "acquired a liking for Epsom salts. She began at an early age with a small quantity, gradually increasing the dose until, at her death in her ninetieth year, she had arrived at the generous allowance of a pound and half per diem"! Thor's feat in drinking the sea half dry pales before the performance of this old lady.

A PERILOUS ERRAND.—2 A.M. Police officer (to man in chemist's doorway): "Here, what are you doing in this doorway? You must move on." Night customer: "Sh! I was only waiting for you. I am going to rouse up the night drug clerk, and I want protection."—*New York Life*.



AND

Literary Notes.

Coloured Analytical Tables. By H. Wilson Hake, Ph.D., &c.
London: George Philip & Son.

THIS class-book for students is intended to show the behaviour of the more common metals and acids to the ordinary reagents. The author points out that of the 140 ordinary reactions of the 24 more common metals (including ammonium), no less than 84 are distinguished by their colour; 6 out of the 24 form coloured salts with 12 varieties of colour; 9 out of 24 form coloured oxides with 14 varieties of colour, 7 form a characteristic colour to the flame, and 6 yield distinctive borax beads. He has, therefore, conceived the idea of presenting students with analytical tables containing coloured test-tube representations of the precipitates, &c., which are actually formed, the colours having been carefully matched with the originals and imparted by hand. We had not thought it possible to produce a book of this kind with such success.

Introductory Lessons on Quantitative Analysis. By John Mills and Barker North. London: Chapman & Hall (Limited). Small 8vo. Pp. 85.

THE processes described in this book are suitable for the work covered by the Science and Art Department's Honours examination in inorganic chemistry, as well as the London University examinations. The chapters relate to gravimetric and volumetric analysis, and form the introductory portion of a larger work which the authors are preparing. There are three divisions in the book. The first is introductory, and describes the general operations of quantitative analysis, such as weighing, collection, and washing of precipitates, incineration, &c.; the second describes in a clear manner a number of typical gravimetric estimations; and the third consists of a good account of volumetric analysis. The book is likely to be useful to Major students, who are often apt to neglect gravimetric analysis, and they will find the chapter on volumetric methods of great use to them, as several non-official methods are described which they would be the better of knowing. If there is any fault about this chapter it is the want of worked-out exercises showing how calculations are made. It is a "simple matter" to the experienced to arrive at correct results, but beginners always flounder.

Contribution à l'Etude de la Fièvre Dengue. By Pierre Apéry. Constantinople: A. Christides & Co.

IN this pamphlet M. Pierre Apéry, the editor of the *Medico-pharmaceutical Review of Constantinople* gives an account of the fever-epidemic which has recently been raging in the Turkish dominions, especially in the cities on the eastern littoral of the Mediterranean. A number of synonyms of "dengue fever" in English and French are quoted, in which the author mentions it as identical with "breakbone fever, dandy fever, and three-days' fever." From a historical review it appears that epidemics of this fever have been frequent in the Levant, India, and the West Indies. Antipyrin and tincture of belladonna are recommended as remedies, quinine being accounted by the author much less valuable than antipyrin for combatting this particular malady.

Historia das Plantas Medicinaes e uteis do Brazil. Por Theodoro e Gustavo Peckolt. Part I. Rio Janeiro: Laemmert & Co.

THIS is the first part of a work in which the Messrs. Peckolt, of Rio Janeiro, propose to give a complete description of the medicinal and industrial plants of their country, a task of such magnitude and difficulty that in its successful accom-

plishment the authors must find a lasting monument. The Messrs. Peckolt are perhaps better qualified than anybody else in Brazil to produce a book which, while based on scientific principles, will yet furnish such commercial information as will prove valuable to dealers in those articles of Brazilian produce which find employment in medicine and in the arts and manufactures. They are not only well known as successful and practical pharmacists and drug dealers, but have also acquired considerable renown as botanists beyond the limits of their own country. Those who have visited the Brazilian pavilion at the Paris Exhibition, and noticed the immense quantities of herbs, barks, flowers, and leaves shown there, without any attempt at classification, and ticketed sometimes with the Portuguese, more often only with the Indian, names and indications of employment, must have wished that some authority might undertake the unenviable task to reduce such chaos to order. That Brazil produces some plants which need only to be properly introduced in European markets to render their collection or cultivation profitable is certain, and we should think it quite possible that the work, of which the first volume was issued recently, will assist in creating an outlet for some articles hitherto unknown to commerce. The book is arranged in botanical order, commencing with the cryptogams, and then going on to the angiosperms, which are not completed, however, in the first volume. The work is, of course, in Portuguese, but may be easily mastered by anyone able to intelligently apply a fair knowledge of French and a smattering of Latin.

A Popular Manual of the Law of Railway Rates. By H. C. Richards and B. S. Foster MacGeagh, Barristers-at-Law. London: Simpkin, Marshall & Co. 2s. 6d.

A WELL-ARRANGED digest of the law governing railway rates would be a welcome contribution to current literature, but we cannot credit the book before us with fulfilling such a requirement. The authors profess to give "a synopsis of the law as it is at present established by legal decisions." Here is an extract, complete in itself, which will fairly show how inefficiently they have accomplished this part of their task:—

Though competition is recognised both by the Commissioners and the statute, it does not justify the companies in the eye of the law in giving a reduction in rates to any individual or particular customer. Lord Chief Justice Cockburn has laid down in *Harris cases*: "In all cases the general public would be treated with perfect equality." (*L.R. & C.T. Cases*, p. 113.)

Writing as "lawyers for laymen," they aim "to make as clear as possible the recent and existing legislation on the subject of railway rates." We quote the following as an indication of their method of exposition:—

A new power is now added, by Section 12, of awarding damages which the Commissioners find such party to have sustained, rather in addition to or in substitution for, such other and further relief as the applicant might be entitled to.

The "such party," we may mention, does not appear to relate to anybody previously alluded to. The slipshod style of the paragraphs we have quoted is pretty evenly maintained throughout the volume.

Facts and Observations concerning Railway Rates, and Practical Suggestions relating to the Proposed Revised Classification. By J. W. Gray, Specialist in Railway Rates. Manchester: John Heywood. 1s.

MR. GRAY abuses the railway companies with a vigour which ought to satisfy the most earnest controversialist. Thousands and thousands of young men, we are told, are trained in the offices of their goods departments "in the study of artifice and practice of deceptive acts which would be called swindling if done by a private trader." No atom of evidence is offered in support of this and other strong language, nor does the author in his subsequent suggestions give sufficient indication of his qualifications as a railway expert to induce us to attach exceptional weight to his somewhat vague recommendations.

NEDERLANDSCHE PHARMACOPÉE.

THIRD EDITION, 1889.

Suppositoria.

Between these and Solutions we have passed several alterations and additions of minor importance. Suppositories are new. The basis consists of cocoa butter 9 parts and simple ointment 1 part. Suppositories for adults are to be made 4 grammes and for children 2 grammes in weight!

Tela.

Under this name antiseptic gauze is introduced. The fabric to be used should take up water easily and sink therein. Two square metres of it should weigh not more than 100 grammes. The directions for preparing antiseptic gauzes are as follows:—

Sublimate gauze.—Gauze 379 parts, corrosive sublimate 1 part, liquid paraffin 20 parts, ether 200 parts. Make a solution of the three last ingredients, and sprinkle well over the gauze. Keep in a bottle for a day in the same way as the antiseptic cottons are done, then dry. Weight, 400 parts.

Iodoform Gauze.—Gauze, 90 parts; iodoform, 5 parts; liquid paraffin, 5 parts; ether, 50 parts. Prepare as above. Product, 100 parts.

Carbolic Gauze.—Yellow wax, resin, and olive oil, of each 9 parts; hard paraffin, 7 parts. Melt together in a porcelain basin, and add 2 parts of phenol. Immerse in this 64 parts of gauze, keeping it warm on a water-bath until the whole fabric is equally impregnated, then stretch it out, and afterwards keep in a bottle.

Tincturæ.

Except when otherwise directed tinctures are to be made by eight days' maceration, with subsequent pressure and filtration. As stated in our editorial note, the specific gravities of tinctures are given, their colour, taste, &c., being also described. The menstrua used are rectified spirit, s.g. 0.831–0.837, and dilute spirit, s.g. 0.887–0.892. The following particulars of the simple tinctures are of interest:—

Dilute Spirit Tinctures.

	Sp. Gr.		Sp. Gr.
Aloes (1-5)	0.942–0.948	Gelsemii (1-10) ..	0.859–0.885
Arnica (1-10)	0.892–0.898	Gentiana (1-5) ..	0.910–0.920
Aurantiorum (1-5) ..	0.910–0.915	Ipecacuanha (1-10) ..	0.839–0.896
Catechu (1-5)	0.932–0.933	Lobelia (1-10) ..	0.888–0.896
China (1-5)	0.912–0.918	Quassia (1-5) ..	0.837–0.835
Cinamomi (1-5)	0.895–0.900	Ratanhia (1-5) ..	0.906–0.914
Colchici Sem. (1-10) ..	0.890–0.898	Sczalis Cornuti (1-5) ..	0.832–0.838
Croc (1-10)	0.900–0.908	*strychni (1 ext.-99) ..	0.882–0.893
Digitalis (1-10)	0.893–0.903	Valeriana (1-5) ..	0.902–0.908
Gallurum (1-5)	0.943–0.950		

Rectified Spirit Tinctures.

	Sp. Gr.		Sp. Gr.
Asafoetida (1-5)	0.850–0.858	Castorei (1-10) ..	0.848–0.856
Benzoes (1-5)	0.873–0.882	†Eucalypti (1-5) ..	0.847–0.853
Cantharidum (1-10) ..	0.832–0.839	Myrrha (1-5) ..	0.845–0.851

Trochisci.

Sodium bicarbonate, ammonium chloride, and iron lozenges are new under this heading. The formula for santonin lozenges has been altered.

Unguenta.

Boric, Hebra's, cold cream, and yellow mercuric oxide are the new ointments. White and yellow vaseline have been introduced, but they do not constitute the basis of any of the official ointments. We may quote the formula for cold cream. Melt together white wax, 5; spermaceti, 10; and olive oil, 60; and add, with constant stirring, water, 25; with 1 drop of otto of rose for every 100 grammes.

* Assayed 100 grammes should yield 1 gramme of extract, and 150 mg. of alkaloid.

† This tincture is directed to be made with dilute spirit, but the nature of the drug and the density given obviously show that strong spirit is intended.

CHEMISTRY.

As stated in the last article, the chemistry of the Pharmacopœia has undergone very thorough revision. In most cases processes of manufacture have been discarded, and there is thus provided an amount of space which has allowed the chemical editors a free hand in supplementing the methods of testing chemical substances. There was much need of this. The old methods were rough rather than precise. In the following notes we consider the contents as far as possible in groups, and only take into account those points which are novel or of general interest. New remedies will therefore come in, but it will not be necessary to say, *e.g.*, that a certain salt should not react with barium chloride, silver nitrate, and so on. It is noteworthy that chemical formulæ are not given.

We are able to state that the Pharmacopœia Committee was divided into sections, each with its own department, the arrangement being as follows:—

Botany.—Professor Oudemans and Dr. Coster.

Chemistry.—Professor Gunning and Professor Van der Burg.

Pharmacy.—Professor Stoeder, Dr. Van Embden, and Mr. Van Ankom.

Therapeutics.—Professor Huet and Professor Stokvis.

[New] Acetanilidum—Acetanilide—Antifebrinum.

Amongst the characters which acetanilide should possess are—its melting point -120° , solubility in chloroform, ether, and spirit (4 parts of sp. gr. .831). It should dissolve in 200 parts of cold water, and in 18 parts when slowly raised to boiling-point. The aqueous solution should be neutral, and should give a yellow colour with ferric chloride, the mixture changing to a brownish-red on heating; 100 milligram. warmed in 1 c.c. of hydrochloric acid, then mixed with 3 c.c. of water containing a drop of phenol, gives a violet-red colour with chlorinated lime, which ammonia in excess changes to a blue; 500 milligram. treated with 5 c.c. dilute hydrochloric acid at the ordinary temperature, and filtered, should not give these colours with the reagents named.

Aether.

This liquid remains substantially the same as that of the last Pharmacopœia, sp. gr. 0.722 – 0.725, and b.p. 36° . It should not, when shaken at 15° with an equal volume of water decrease to a greater extent than a tenth. Higher alcoholic derivatives are detected by shaking with 1 c.c. of the ether with an equal volume of sulphuric acid, when, on standing, the acid should remain clear and colourless. Another test is to add to 2 c.c. of the ether 6 drops of mercuric chloride solution (1 in 20) and 6 c.c. of baryta water; yellow mercuric oxide is formed, and should not be dissolved. If filtered the filtrate should not be coloured on the addition of ammonium sulphide. This test is intended, we presume, to detect the presence of an acid such as ethyl-sulphuric acid. It is not very precise, *e.g.* 6 “drops” of mercuric chloride solution, but the amount of barium hydrate is so largely in excess that there is little fear, even if very large drops of the mercuric solution are taken, of any of the mercury salt being left in the filtrate.

[New] Antipyrinum—Antipyrine.

As in the case of acetaniline, the physical appearance and character of this substance (which the Pharmacopœia does not attempt to describe chemically) are given. It is said to be in small, bitter, and colourless crystals, which melt at not less than 110° , and is burnt up at a higher temperature. Its solution in water or other solvents should be perfectly neutral, and it is stated that it gives precipitates with other well-known tests, for identity are given.

Aqua Communis—Gervoon Water.

New definitions and tests are given. Rain or spring water containing not more than 0.5 gramme of solid matter per litre may be used, and 100 c.c. soda solution should not decompose more than 1 c.c. of Nessler's solution. The water should also be free from organic impurity, iron, and other metallic contamination, for which good, common tests are given.

Trade Notes.

THE French Hygienic Society, of 6 Conduit Street, introduced some coca-tobacco into this country some time since and duly came into collision with the Customs and Excise authorities. They have been in negotiation with these guardians of the public revenue, and now the difficulties have been smoothed over and the importation of the tobacco has been resumed.

MR. THOMAS WOOD, of Swanley, the well-known manufacturer of Kentish Fruit Jams, is introducing to the public, through the drug trade, his "Celebrated Fruit Compound" for chest affections. This compound has a genuine fruit basis, is done up in good style, and is being put before the public in such a way that it is likely to take a lead amongst such medicines. Mr. Wood supplies very striking posters to chemists, and he invites them to send for a sample of the compound.

We publish to-day a remarkable prospectus giving details of the patent medicine business of Messrs. H. H. Warner & Co. (Limited), which is now put on the market in shares to the amount of 550,000*l.* The figures given as to the extent of the business, and certified to correspond with the books of the firm by the most eminent London accountants, are astonishing. The sales of Warner's Safe Remedies in the United States are reported to yield an average yearly net profit of over 89,000*l.* In the United Kingdom the sales in 1888 amounted to 62,727*l.*; in Australia in the same year to 42,103*l.*, with a net profit of 26,504*l.* Considerable business is also done in Canada and in Germany. The business in Warner's "Log Cabin" remedies and "Safe" Yeast is also added to the "Safe" remedies. For the whole a sum of 700,000*l.* is to be paid to Mr. Warner, who in return guarantees to hand over cash, freehold, and tangible property to the value of at least 325,000*l.* The above capital is proposed to be raised as follows:—150,000*l.* in 6 per cent. debenture bonds, 200,000*l.* in 8 per cent. cumulative preference shares, and 350,000*l.* in ordinary shares. One-third of each class of shares is to be taken by Mr. Warner towards payment of his claim, and he is to be managing director for 5 years, but will take no remuneration unless the net profits reach 117,000*l.* The directors are the Earl of Crawford (chairman), Mr. T. W. Boord, M.P., C. E. Howard Vincent, C.B., M.P., C. T. Kingzett, Esq., F.I.C., &c., of the Sanitas Company, and R. Baelz, Esq., of Spratt's Patent.

Personalities.

MR. J. NEWTON, of Great Bridge, has sold his business, through Mr. F. J. Brett, of Leicester, to Mr. H. Higgott, of Burton.

MR. EDGAR J. MILLARD, who for the last five years has been in Messrs. Savory & Moore's laboratories, has left there for a similar position on Messrs. C. J. Hewlett & Son's staff.

THE Davy medal has this year been awarded to Dr. W. H. Perkin, F.R.S., for his researches on magnetic rotation in relation to chemical constitution.

MR. G. T. W. NEWSHOLME has disposed of his branch shop, London Road, Sheffield, to Mr. Lawford, who for a number of years has managed Mr. Fell's business at Huddersfield.

MR. W. M. ELLIOT, of 72 High Street, Coldstream, has purchased the good-will, prescription books, &c., of Mr. W. F. Tocher's business at Coldstream, and has amalgamated it with his own.

MR. JAMES CONROY, a student of University College, Liverpool, and son of Mr. M. Conroy, F.C.S., has just taken his degree of Bachelor of Science of the London University. He is 19½ years of age.

MR. ALEXANDER WRIGHT, chemist and druggist, formerly of Rothes, now of Kirkwall, Orkney, on leaving the former place was presented with a highly complimentary address from the Rothes branch of the Moray and Nairn Advanced Liberal Association, of which he had been president for five years.

THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION (LIMITED).

THE eleventh annual general meeting of this Association was held on Monday afternoon, November 18, at Anderson's Hotel, Fleet Street, Mr. Horace Davenport occupying the chair. The balance-sheet showed a profit for the year of 2,867*l.* 3*s.* 7*d.*, of which amount it was proposed to devote 1,268*l.* 15*s.* to the payment of a dividend of 7½ per cent. (as against one of 5 per cent. last year), the remainder being devoted towards writing off amounts credited to plant, premises, vans, and preliminary expenses, as shown in our summary of the report last week.

The CHAIRMAN, in presenting the balance-sheet, said he was sorry to see such a small gathering, but he supposed the members of the Association were so thoroughly satisfied with the report that they did not think it worth while to attend. A considerable increase in their trade had enabled them to declare a much better dividend than last year. The increase of members had been over a hundred. This was very encouraging, and he thought it entirely did away with the idea that existed, that chemists would not combine. It was now proposed to wipe off entirely the preliminary expenses out of the profits, and this would place the association in the very exceptional position of standing with a good-will for nothing. It was very pleasing to recommend wiping out these preliminary expenses, and he hoped they would never appear on the balance-sheet again. The managers thought a great deal of expense might be saved if the members would look upon the association more as a co-operative society, and interest themselves more in the management of it. The sales for October of this year were ahead of those for the corresponding month last year, and the management had every reason to hope for a good dividend next year. In answer to a shareholder with reference to the poorness of the waters at Harrogate, he said that new machinery had just been placed there, and they expected to turn out a much better water than before. The profit at Bristol, as they knew, was almost *nil* last year, but this year, owing to the great improvement in trade, it was over 500*l.* He proposed that the balance-sheet be accepted.

MR. T. NICHOLLS seconded the motion, which was carried unanimously.

The CHAIRMAN, replying to a question as to a cheaper rate being obtained from the railway companies for the carriage of goods, could hold out no hope of any such advantage. The association, in conjunction with several large firms, had appeared before the railways board to oppose putting up mineral waters from a lower class of rates to a higher. They had succeeded in getting bottled goods put back into the lower class, but the railway companies would not give way in respect to syphons, as they ran particular risks for breakage.

Messrs. G. Goldfinch and J. H. Wilson, retiring directors, were again re-elected.

MR. T. NICHOLLS proposed the following resolution:—

That an extraordinary general meeting of the members of the Association be convened for the purpose of ascertaining how far, and in what direction, the present system of co-operation might be extended among chemists for the furtherance of objects conducive to the sale of mineral and other waters; that power be given to form a committee not exceeding seven for the purpose of framing a scheme with that object, and that proxies be received.

He wished to call attention to some words in the Memorandum of Association that referred to the resolution. They were: "to do all such acts and things as are incidental and conducive to the above objects," the above objects being "to manufacture aerated waters, and to supply them to chemists and hospitals." He asked them to vote for his resolution to call a meeting to ascertain how far the principle of co-operation might be extended, and whether they might not open their doors to a wider trade.

MR. R. O. FITCH seconded the resolution.

The CHAIRMAN said the Memorandum of Association appeared to him to be very firm, and he did not take the same view as Mr. Nicholls; he was of opinion they could not enlarge their trade any way they pleased. The solicitor was in the room, and he would call upon him to give his view of the matter.

The SOLICITOR: This is a suggestion that a general extraordinary meeting should be called. There are two means of calling such a meeting: either fifty shareholders must do it, or the directors must do it. Mr. Nicholls has proposed the sale of something else than "aërated mineral waters." That is beyond the Memorandum of Association, and could not be done.

Mr. COOKE (a shareholder) thought the motion was out of order. He was convinced the Association had no power to pass such a resolution. If they carried out Mr. Nicholls' suggestion they would have to form a new company, and he thought it very undesirable to charge a successful association with what might be a doubtful success.

Mr. NICHOLLS again arose to address the meeting, but his motion was ruled out of order.

Mr. LONG, seconded by Mr. FELTWELL, proposed a vote of thanks to the chairman and directors for their services during the past year, and—

The CHAIRMAN having acknowledged thanks on behalf of himself and the directors, the proceedings terminated.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, at any time within one month of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," November 6, 1889.

"ST. IPPOLYTTS OIL," and other wording on label; for an embrocation for human use. By Isaac Matthews, St. Neots, Hunts. 76,653.

"RHEUMALINE EMBROCATION," and signature on label; for an embrocation for human use. By W. Howlett & Co., 75 Hill Street, Peckham, S.E. 91,580.

Design of the sun rising from the sea, with "'Sun' Manufacturing Company" and other wording on label; for vegetable oils, &c., and turpentine. By H. D. Fisher, trading as the "Sun" Manufacturing Company, Bombay, India. 74,675.

"LYONS' INK," and other wording on label; for writing and copying ink. By Joseph Lyons, 19 Park Street, Manchester. 92,384.

"MITRE THRIFT TEA"; for tea. By Kearley & Tonge, Mitre Square, Aldgate, E.C. 73,510.

"DE TABLEY' SAUCE"; for a sauce. By Kay Brothers (Limited), St. Peter's Gate, Stockport. 75,000.

"CHESHIRE HUNT SAUCE"; for a sauce. By Kay Brothers (Limited), St. Peter's Gate, Stockport. 75,001.

"E.S.M." on diamond label; for food or ingredients for food. By Engelska Soinslagteriet, Malmo, Sweden. 88,551.

Circular design showing animals' heads, on label; for food for cattle, dogs, and poultry. By the British Cattle Foods Company (Limited), 11 Farrington Road, E.C. 88,926.

"MEADOW"; for condiments. By Henry Charles, 183 Walworth Road, S.E. 90,631.

"FINE OLD WELSH DRINK," and other words on label; for a non-alcoholic, non-aërated beverage. By Morgan William James, Llanelly, 91,461.

"JOHNSTON'S BRITISH WINES," and design for label; for British wines. By Thomas Johnston, 153½ Brighton Road, Birmingham. 91,260.

Fanciful design of man and eagle, with "Salzbach" and other words; for mineral and aërated waters. By William Glendenning, 9 Grainger Street, Newcastle-on-Tyne. 91,255.

"J. H. & Co. (LIMITED)" in circular design for label; for mineral and aërated waters, &c., including ginger-beer

By Joseph Hobson & Co. (Limited), Regent Street, Heywood. 92,019.

"MYRTLE"; for candles, detergents, soap, oils, &c. By Goodwin Brothers, Ordsall Lane Soap Works, Manchester. 91,691.

"WHITE DAISY," and other words on circular label; for illuminating, &c., oils. By Crichton's Oil Company (Limited), Newcastle-on-Tyne. 92,207.

"WAR"; for candles, soap, &c., and oils, &c. By D. C. Keeling & Co., Blundell Street, Liverpool. 92,244.

"LIFE"; for candles, soap, detergents, &c., and oils, &c.; also for perfumery. By D. C. Keeling & Co., Blundell Street, Liverpool. 92,246, 92,247.

"TRUE BLUE"; for candles, soap, detergents, &c., oils, matches, starch, &c.; also for perfumery. By D. C. Keeling & Co., Blundell Street, Liverpool. 92,248, 92,249.

"MAZAPER" and figurative design; for perfumery, toilet articles, &c. By Mnatzakan Hakoumoff, The Vale, Acton, Middlesex. 84,975.

"WHITE HEATHER"; for perfumery (Class 48). By the Scottish Drug Depot (Limited), 155 Constitution Street, Leith. 88,929.

"PILOSERINE," and design of closed hand; for hair wash. By M. A. C. Cope, trading as Maccopia, 5 Alma Terrace, Kensington, W. 90,827.

Picturesque design, and "Barnett & Co., Perfumers"; for perfumery, &c. By Barnett & Co., 31 Broad Street, Birmingham. 91,459.

"KOH-I-NOOR"; for preparations for the hair. By J. S. Collins, the Grand Hotel, Trafalgar Square, S.W. 92,320.

Picturesque design, and the words "Cuckoo Soap"; for toilet soap. By G. T. Bishop, 4 Melcombe Place, Dorset Square, London. 92,352.

From the "Trade Marks Journal," November 13, 1889.

"HOPLEMUROMA," and imprint of a horse's hoof, on label; for a medicine for horses and cattle. By William Clark, 528 Oxford Street, W. 74,146.

"PEDELINE SOAP"; for a pharmaceutical preparation for the feet. By Fredk. Round, 25 York Road, Birkdale. 90,673.

"B. & F. C. C." on label; for powders to compound mineral water. By G. A. Seebohm (trading as the British and Foreign Chemical Company), 4 Corporation Street, Manchester. 90,823.

"VIVEKOS"; for a medicine for human use. By W. T. Quick, Lympstone, Devon. 92,267.

Design of shield and spear, with "Richardson's Pectoral Balm," and other wording; for a mixture for coughs, colds, &c. By J. Richardson, 28 Snerton Road, Nottingham. 91,967.

"CÉREBRINE"; for a patent medicine for headache and neuralgia. By E. Fournier, 51 Grande Rue, Issy, Seine, France. 92,282.

Picturesque illustration of river and bridge, with the "Photo Packet Pure Tea Company," and other words, for label; for foods, &c. By Photo Packet Pure Tea Company, 7 and 8 Idol Lane, London. 90,663.

"JIKKA TING"; for tea, and substances used as food, &c. By A. S. Holmes and J. F. Pridham (trading as A. S. Holmes & Co.), Stockton-on-Tees. 91,853.

"EUNYMNIZED"; for substances used as food or as ingredients for food. By Oppenheimer Bros. & Co., 1 and 3 Sun Street, Finsbury, E.C.

From the "Trade Marks Journal," November 20, 1889.

"VACUUM"; for oil for veterinary purposes; oils used in medicine and pharmacy; mineral and vegetable oils; oils used as food. By the Vacuum Oil Company, The Albany, Liverpool. 92,656; 92,660; 92,659-92,658.

- "H. & W." in triangle for label; for chemicals used in manufactures and philosophical research. By Howards & Sons, trading as Hopkin & Williams, 16 Cross Street, E.C. 91,970.
- "K" on shield surmounted by crown; for all articles in Class 3. By Kay Brothers (Limited), St. Peter's Gate, Stockport. 74,997.
- "B. F. C. C.," and wording, on circular label; for powders for mineral waters. By G. A. Seeböhm, trading as the British and Foreign Chemical Company, 4 Corporation Street, Manchester. 90,823.
- "RICHARDSON'S PECTORAL BALM," and other words, on shield; for a mixture for coughs, colds, &c. By John Richardson, 28 Sneinton Road, Nottingham. 91,967.
- "OPTICURA"; for eye lotion (medical). By E. Smith, 174 Lancaster Road, Notting Hill, London. 92,321.
- "FLUID EXTRACT OF SENNA-PODS," with signature, and other wording for label; for a medicine for human use. By Rankin & Borland, 7 King Street, Kilmarnock. 92,356.
- "H. G. M." and motto on label; for chemical substances for use in medicine and pharmacy. By H. W. G. Morris, Thame, Oxon. 92,587.
- "MARSEL'S PRESERVING CO." and other words on label; for substances used as food. By Marriott & Seligmann, trading as Marsel's Preserving Co., Libau, Russia. 78,302.
- "PEPTONISED MEAT EXTRACT COCOA" and other wording, with sketch of the Emperor Frederick III., on label; for cocoa. By G. Scheibler, trading as Scheibler Brothers & Co., 23 New Broad Street, E.C. 79,290.
- Design of ram's head and anchor, with wording, on label; for condensed milk. By Webster & Co., 5 East India Avenue, E.C. 84,925.
- Sketch of target; for limejuice, for use as food, and for limejuice and other cordials. By Melrose, Drover & Co., Leith, N.B. 92,453.
- "TELAMONA"; for cocoa and coffee. By F. H. Pawsey, trading as F. H. Pawsey & Co., 67 Lower Thames Street London. 92,771.
- "SALZBACH"; for mineral and aerated waters. By W. Glendenning, 9 Grainger Street, Newcastle-on-Tyne. 91,256.
- "THE CHATHAM BOTTLING STORES," and signature; for mineral and aerated waters. By Thomas Bishop, Brook, Chatham. 92,116.
- Picturesque design of squirrel and tree; for mineral and aerated waters. By H. W. Clegg & Co., Waterfoot, near Manchester. 92,224.
- "LIFE-BOAT"; for common and perfumed soap, starch, blue, and goods in Classes 47 and 48, except matches. By Lever Brothers, Sunlight Soap Works, Warrington. 89,864, 85,411.
- "NEW MILK SOAP," and sketch of a cow; for common and perfumed soaps. By L. Cowan & Sons, Barnes, Surrey. 90,042, 90,043.
- "ERMINÉ"; for common soap, oils, starch, blue, &c. By the Horticultural and Agricultural Chemical Company, 97 Milton Street, Glasgow. 91,431.
- "WAVE"; for goods in Class 47. By Lever Brothers, Port Sunlight, near Birkenhead. 92,003.
- "HEATHER"; for common soap. By J. Young & Sons, Bridgeton, Glasgow. 92,453.
- "FERN"; for perfumery and toilet articles. By Goodwin Brothers, Ordsall Lane Soap Works, Manchester. 91,203.
- Picturesque design, with the words, "Miss Langtry's Skin Lotion," &c.; for a skin lotion. By R. W. Stevenson, 19 Victoria Street, Derby. 91,473.

TAKING CARE OF THE BABIES.—The chemists of the U.S. Agricultural Department are, it is said, about to investigate the different infants' foods now on the American market.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., November 21.

BUSINESS remains fairly steady in the drug and chemical markets, but there have not been any exceptionally great changes this week. In drugs the chief points calling for note are an advance in oils of star-anise and bergamot, in insect flowers, Canada balsam, and in raw camphor and China galls. Senegal, gum arabic, and opium are very firm. Cinchona sold rather better, castor oil somewhat easier, and saffron lower in price. In dysenteries, &c., China soy and Japan wax are reported dearer, shellac is higher, cloves for delivery are in demand, sandarach firm. East Indian gums generally lower to-day; Cochin ginger, mace, nutmegs, and pimento also easier. Gambic is lower, but for alum more money is asked, and benzol and sulphate of ammonia are also higher. On the other hand, bleaching-powder is much lower. As regards chemicals, citric and tartaric acids and quinine have been rather quiet this week. Sugar of lead is very strong, and cocaine dearer. Quicksilver a turn lower. Chlorate of potash easier, glycerine steady, and cream of tartar considerably higher.

THE CINCHONA SYNDICATE.—The Ceylon mail to hand this week brings news that the Cinchona Syndicate has now definitely commenced operations, Messrs. Darnley, Butler & Co., Colombo, acting as agents. The syndicate has so far modified its original proposals as to consent to accept bark already baled. This will allow planters to get baling done wherever they like, and will remove one of the chief objections urged against the scheme by certain planters. It is stated that Messrs. Arbuthnot, of Madras, are equally keen in following similar lines to those adopted in Colombo, and that it is very probable that a syndicate will be formed in Madras to control the output from thence. The Ceylon planters are said to be rallying well to the support of the syndicate, and further adhesions were expected as soon as permission shall have been received from the estate owners resident in England and elsewhere.

AMORPHOUS QUININE LIQUOR.—A parcel of 600 bls. of this article, imported about four years ago for account, we believe, of the Indian Government, was declared for sale at last week's drug auctions, but did not actually figure in the catalogues. The lot was put up for sale in 1885, when it first arrived, but could not find a buyer at that time. As the article is of some theoretical interest we secured a small sample, and in the limited time at our disposal have made an analytical examination of it, the results of which deserve to be placed on record. The liquid has all the external characteristics of liquid extract of cinchona; it is of dark brown colour and of the consistence of a thin syrup. But the aroma is very poor—not at all like a bark extract. The taste is distinctly bitter. We found that it responded abundantly to alkaloidal reagents, and a quantitative test showed that all the supposed colouring matter was precipitated by alkali and was taken up by the alkaloidal solvents (chloroform and benzolated amyl alcohol), and the liquid thus proved to be a solution of amorphous cinchona alkaloids in combination with sulphuric acid. We obtained 20 per cent. of the amorphous mixture from the sample. The liquid probably consists of the mother liquors derived from the manufacture of cinchona febrifuge. It is, of course, valueless, and the holders are evidently aware of this fact, as we understand that they are willing to part with the lot for the cost of the stone jars in which it is lodged, throwing in the liquid free of charge.

THE revised Russian Customs tariff, under which the duties on many articles, especially certain classes of machine-tools, dyestuffs, tanning materials, colonial goods, glass and earthenware, chemicals, and pharmaceutical preparations, are to be increased to such an extent as to amount to virtual prohibition of importation, will probably come into force at the close of the first quarter of 1890. A new feature in the tariff is the adoption of a scheme by which the present duties are preserved for a number of articles, with the proviso that they will be applicable to the lowest class of goods only, while for goods of better manufacture and superior quality the duties will be doubled or even trebled. It was at first thought that the new Customs law would be aimed specially against Germany, but, according to this particular "shoddy" clause, it would certainly seem as if Germany is to be exceptionally favoured, at the expense of such countries as Great Britain and France.

THE BLEACH ASSOCIATION.—A meeting of members of the chemical trade was held at Liverpool on November 14, to consider the question of renewing the combination of bleaching powder manufacturers, which is due to expire at the end of this year. The combination has existed for 7 years, and its immediate financial results have been exceedingly beneficial to the makers, as the price of bleach, which was 4*l.* per ton before the combination, has been maintained by it at 6*l.* to 8*l.* per ton, the Leblanc process, by which the combined manufacturers work, being thus artificially kept up, and the output regulated to the requirements of the markets. At the Liverpool meeting it was, however, unanimously agreed not to renew the combination, as no common mode of action could be found, the proposal to continue on the basis of the limitation of the decomposition of salt by 25 per cent. proving unacceptable to the majority. From the beginning of next year there will thus be free competition in this important article, and some of the larger manufacturers regard this prospect with much satisfaction. Coal, salt, and wages, however, are so much dearer now than seven years ago, that it is questionable whether, even without the combination, the previous low rates will return. The acid association follows the dissolution of the bleach combination.

THE WAREHOUSING OF PRODUCE.—It is said that the clock companies and the owners of private warehouses contemplate a general rise in their charges for the storage of goods, and that they have already given notice that the rent-charge on shellac, which is now 7½*d.* per ton per week, is to be raised at the commencement of next year, probably to 1*s.* per ton. With this exception, however, no notice of any definite revision of tariffs has been given yet. Should the report prove true, the proposals are sure to meet with a determined opposition on the part of the produce trades, who contend that if any increase is to be made in the charges at all, such increase should fall on the landing and delivery of goods, where money is actually expended, but not upon the mere storage of goods which do not require handling, especially as it is well known that the value of the warehouses and wharves themselves is lower now than it has been for a long time. We hear that there is some idea that the docks and the wharves may combine and agree upon a common tariff.

ACID (CITRIC).—Most holders remain very firm, especially for forward delivery; but there has been less business this week, and we do not know that less than 1*s.* 4½*d.* would buy on the spot. Lawes' make is held for 1*s.* 4½*d.* per lb. For forward delivery the price asked is 1*s.* 4¾*d.* to 1*s.* 5*d.* per lb.

ACID (OXALIC) neglected, with sellers at 4½*d.* per lb. *Sal acetos* dull at 6½*d.* to 6¾*d.* per lb.

ACID (TARTARIC).—After a good deal of active speculation this market also closes quiet with a somewhat dull tendency. English makers ask 1*s.* 4*d.* spot and 1*s.* 4½*d.* for forward delivery; the foreign agents offer at 1*s.* 3¾*d.*, and would, perhaps, take a shade less, but there does not appear to be very much confidence among the trade.

ALUM.—Prices have advanced owing to the active demand,

and are now quoted at 5*s.* 6*d.* for loose lump, and 6*s.* 1½*d.* per cwt. for ground alum in bags.

AMMONIA SALTS.—*Carbonate* quiet at 3¾*d.* per lb. *Sal ammoniac* rather scarce, and in good request at 34*s.* to 36*s.* per cwt. *Sulphate* has been advanced all round, and is now held at 12*l.* 2*s.* 6*d.* for 24 per cent. London grey, 12*l.* Beckett terms (nominal), and 12*l.* 1*s.* 3*d.* Hull and Leith. For delivery over next year 12*l.* 5*s.* is asked.

ANTIMONY very firm at 72*l.* to 74*l.* for star regulus, while some holders require as much as 76*l.* Japan scarce, and more money asked, 45*l.* nominally.

ARSENIC firm at the established prices; 13*s.* 3*d.* per cwt. for best white powder in kegs.

BALSAM (CANADA) reported dearer from America, at 1*s.* 4*d.* to 1*s.* 5*d.* per lb. c.i.f.

BALSAM (COPAIBA) remains strong in the States, in spite of the arrival of a rather large quantity in New York, and quotations seem likely to go up still further. The figures now are—for *Angostura*, 2*s.* 6*d.*; and for *Maracaibo*, which is scarce, 2*s.* 4*d.* per lb. c.i.f. terms.

BENZOL higher, and in a strong position: 90 per cent., 3*s.* 4*d.*; 50 per cent., 2*s.* 5*d.*

BLEACHING-POWDER.—London fairly steady at 7*s.* 6*d.* to 7*s.* 9*d.* per cwt.; Tyne flat and lower at 6*s.* to 6*s.* 1½*d.* per cwt. spot, and sellers at 5*s.* for next year.

BORAX.—Refiners firm at 30*s.* to 31*s.* per cwt., according to brand; second-hand, 29*s.*; Californian refined offering at 29*s.* 6*d.* in Liverpool. *Boracic acid* again dearer, at 24*s.* per cwt. on the spot.

CAMPHOR (CRUDE).—Prices have again advanced, business being reported on the spot late last week at 140*s.* per cwt. for 50 tubs *Japan*. For delivery nothing was offering early in the week, but we have since heard of transactions at 120*s.*, c.i.f. terms, for 250 piculs *Japan*, December-January shipment. *Chinese* camphor quite nominal. The *Flintshire* has brought 79 tubs camphor from Kóbé this week.

CHAMOMILES.—The trade now appears to be all provided, and the demand has quite fallen off. Prices are very low.

CINCHONA.—At the public sales on Tuesday the following quantities were offered for sale:—

	Packages	Packages
Ceylon bark	1,776 of which	1,623 were sold
East Indian bark ..	421 "	283 "
Java bark	13 "	" "
South American bark	529 "	91 "
Total	2,739 "	2,006 "

This moderate quantity met with a very good demand, and sold well at somewhat irregular rates, though generally at an advance on the previous auction rates. The proportion of good and rich barks was not so large as at the preceding auctions, and it seemed to us as if comparatively higher rates were often paid for medium and poor barks than for the better lots, though some of the latter evoked some exceptionally good bidding. We should place the unit at fully 2*d.* per lb., and we think that not very many parcels were sold below a 2*d.* unit.

The following few instances show the prices realised by some parcels:—

	Percentage of quinine sulphate	Price per lb.
7,820 lbs. Ceylon succirubra root	2.09	3½ <i>d.</i>
5,300 " " " stem chips, part renewed	1.10	3 <i>d.</i>
5,833 " " " " renewed ..	2.31	5 <i>d.</i>
1,810 " " " spoke shavings ..	3.96	7 <i>d.</i>
6,923 " " " stem chips ..	2.57	5½ <i>d.</i>
2,640 " " " Hybrid ..	2.44	5 <i>d.</i>
11,930 " " succirubra shavings, original	1.83	3 <i>d.</i> –3½ <i>d.</i>
3,880 " " ledgeriana ..	2.87	5 <i>d.</i> –5½ <i>d.</i>
1,305 " " officinalis root ..	1.44	3 <i>d.</i>
6,550 " " succirubra chips, original ..	2.02	3 <i>d.</i>
7,680 " " " " renewed ..	3.35	6 <i>d.</i> –6½ <i>d.</i>
3,120 " South American cuprea ..	1.13	2 <i>d.</i> –2½ <i>d.</i>
7,973 " " " " ..	1.38	2½ <i>d.</i>
4,460 " East Indian crown chips, original ..	1.23	2½ <i>d.</i>
3,830 " " " " renewed ..	2.34	7 <i>d.</i>

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works..	193,214
„ the American, French, and Italian works ..	103,878
„ the Frankfort o/M. and Stuttgart works ..	80,293
„ the Auerbach factory	44,379
Messrs. Howards & Sons	36,519
Agents for the Brunswick factory	20,957
Sundry druggists, &c.	17,672
Total quantity sold	496,522
Bought in or withdrawn	119,638
Total amount of bark catalogued	616,560

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Red varieties, ordinary mixed to fair bold chips, $2\frac{1}{2}d.$ to $4d.$; a fine bright pile, $5\frac{1}{2}d.$; ordinary to fair stem chips, quilly mixed, $2\frac{1}{2}d.$ to $4d.$; very dark and common ditto, $1\frac{3}{4}d.$ per lb.; fair to good spoke shavings, $2\frac{1}{2}d.$ to $3d.$; fine bold bright ditto, $3\frac{1}{2}d.$ to $4d.$; good dusty siftings, $3d.$ to $4d.$; broken and thin mixed druggists' quill, $6\frac{1}{2}d.$; root, of which a large quantity was offered, from $2d.$ up to $6\frac{1}{2}d.$ per lb. Yellow varieties, of which some fine lots were shown, dull to fair quilly chips, $3\frac{1}{2}d.$ to $6d.$; good rich ditto, $6\frac{1}{2}d.$ to $9\frac{1}{2}d.$; some very fine rich lots, mixed with broken quill, $10d.$ to $11d.$ per lb. Good bright spoke shavings, $5d.$ to $5\frac{1}{2}d.$; fine rich root, $11d.$ per lb. Grey varieties: in unusually large supply, ordinary to fair mixed chips, $2\frac{1}{2}d.$ to $4d.$; good small mixed but very quilly and bright, $5d.$; one fine parcel, $11d.$ per lb. Good spoke shavings, $5d.$ to $5\frac{1}{2}d.$; dust, $2\frac{1}{2}d.$; dusty to good rich root, $3\frac{1}{2}d.$ to $8\frac{1}{2}d.$ per lb. *Renewed*: Red varieties, chips, ordinary dark to fair mixed with broken quill, $2\frac{1}{2}d.$ to $4d.$; good bright parcels, $5d.$ to $6\frac{1}{2}d.$; fair siftings, $4d.$ to $5d.$; medium to fine bold rich spoke shavings, $4\frac{1}{2}d.$ to $8\frac{1}{2}d.$ per lb. Grey varieties: good bold mixed quilly chips, $8\frac{1}{2}d.$ to $10d.$; one fine parcel "Dove-dale," $11d.$; good siftings, $6d.$ to $6\frac{1}{2}d.$; fine spoke shavings, $11d.$ per lb. *Hybrid*, good to fine spoke shavings, $4\frac{1}{2}d.$ to $8d.$; mixed stem chips, $3\frac{1}{2}d.$ to $7\frac{1}{2}d.$; siftings, $4d.$ to $4\frac{1}{2}d.$ per lb.

EAST INDIAN BARK.—*Original*: Red fair quilly chips, $2\frac{1}{2}d.$ to $3\frac{1}{2}d.$; good bright spoke shavings, $4\frac{1}{2}d.$; fair thin silvery druggists' quill, $6\frac{1}{2}d.$; root, $2\frac{1}{2}d.$ per lb. Grey fair quilly mixed chips, $3d.$ to $4\frac{1}{2}d.$; fine bold bright quilly chips, $6d.$; common dusty shavings, $2\frac{1}{2}d.$ *Renewed*, good to fine strong red chips, $5d.$ to $7d.$; fair shavings, $3d.$ to $4\frac{1}{2}d.$; grey dusty and small to good quilly mixed chips, $4d.$ to $6\frac{1}{2}d.$; bold dark shavings, $7d.$ per lb.

JAVA BARK.—Twelve cases very fine showy red druggists' quills, mostly very heavy and silvery, sold with strong competition at $1s. 1d.$ to $1s. 6d.$ per lb. For a parcel of rather dull thin and irregular quills $6d.$ per lb. was refused.

SOUTH AMERICAN BARK.—Of 529 packages *Cuprea* 91 bales partly old, partly recent import, sold at $2d.$ to $2\frac{1}{2}d.$ per lb. for common; the rest was bought in at $5d.$ to $5\frac{1}{2}d.$ per lb.

We understand that a quantity of *Cuprea* barks of old import will be offered without reserve at the next bark auctions.

Our imports from all quarters since the last report have been 788 packages.

CASCARA SAGRADA.—The quotation here is about 65s. per cwt. for fair quality. In the States speculators are reported to be buying up what parcels are available at the parity of about $6d.$ to $6\frac{1}{2}d.$ per lb. The holders in the Western States are asking much higher rates than are current at present.

COCAINE.—There are further reports, said to be reliable, of an advance in the price of leaves in South America in consequence of prolonged drought, and it is stated that the market is likely to rise still further before the arrival of the next crop in April 1890. The manufacturers now ask from $15s.$ to $15s. 6d.$ per oz. for cocaine hydrochlorate in bulk. *Howard's* brand was advanced $6d.$ per oz. this week, and the *B&S* brand also, both being now $15s. 6d.$ per oz. There is said to be a pretty large stock of coca leaves in New York,

though from what we hear the last arrivals there have found ready buyers for consumption.

COPPER (SULPHATE) somewhat easier, at $23l. 10s.$ to $24l.$ spot. December and future delivery firm at $23l. 5s.$ to $23l. 10s.$ for the former, and $22l. 10s.$ for January-June.

CREAM OF TARTAR.—Much dearer, and advancing almost daily. Best white French crystals are now quoted at $109s.$ to $110s.$ per cwt., and scarce at those prices, $108s.$ having been paid.

ERGOT OF RYE remains steady. We hear of small sales of good sound *Spanish* ergot at $1s. 6d.$ per lb.; while *Russian* is quoted at $1s. 3d.$ per lb.

GALLS.—*China* galls in demand, and again dearer on the spot, about 900 cases being reported sold, first at $70s.$, and then at $71s.$ to $72s.$ per cwt., for good quality. For arrival no business is reported. *White Turkeys* selling in small lots at $45s.$, and blues at $54s. 6d.$ to $56s.$ per cwt., according to quality.

GAMBIER.—Prices are again easier. At auction on Tuesday 300 bales were sold "without reserve" at $26s.$ per cwt., a few lots bringing $26s. 3d.$ This is a decline of $3d.$ to $6d.$ per cwt. as compared with last week.

GLYCERINE.—It is stated that there is a somewhat better feeling in the market, but prices are not really higher. The quotations range from $60s.$ to $61s. 6d.$ for double-distilled, s.g. 1.260.

GUM ARABIC.—The auctions held to-day included no less than 4,433 packages, three-fourths of it Bombay gum, and about 500 packages Aden, 250 packages African, and the rest Australian, Cape, and Persian gums. The sales dragged on exceedingly slowly, and most lots sold had to be forced off at a decline, Bombay, Kurrachee, and Aden gums being about $5s.$ lower, and Ghatti's also selling at easier rates. Good to very fine pale *Kurrachee* brought $37s. 6d.$ to $90s.$; oilbanum-scented *Aden*, ordinary red to fair, $19s.$ to $36s. 6d.$; common to fine *Ghatti*, $16s.$ to $67s.$; fine pale frosted *Aden* sorts, $5l. 7s. 6d.$ to $5l. 10s.$; good ambery *Cape* sorts, $76s.$ to $77s.$ Of *Senegal* gum the new crop has arrived in Bordeaux, and sells at higher prices, Bas du Fleuve at $92s. 6d.$ to $95s.$, good Galam about $82s. 6d.$ per cwt. *Trieste* grains, $15l. 10s.$ to $15l. 15s.$; fine white picked Trieste gum up to $23l.$

GUM BENJAMIN.—Some of the fine *Sumatra* gums which were sold at the last auctions have since changed hands again, we understand, at about 5 to 8 per cent. advance, and it is said that higher prices are not unlikely to rule at the coming auctions. Fine *Siam* gum is reported very scarce, and in request. Our imports of gum benjamin remain heavy, but much of it is of very ordinary quality.

GUM SANDARACH.—The available supply is very small at present, and the new crop is not yet available. The quotations now run from $75s.$ to $85s.$ per cwt., according to quantity, but fine sandarach of the new crop would not be unlikely to realise up to $90s.$ per cwt.

GUM THUS.—The new American crop is very late, and rather overdue, owing to unfavourable weather. There is a very strong competition for the first lots at excessive prices, $18s. 6d.$ per cwt. being spoken of, though for future delivery the quotations are rather lower.

INSECT FLOWERS.—There is a good demand on the Trieste market, and prices have advanced to $76s.$ for open, $90s.$ for half open, and $105s.$ to $115s.$ for closed flowers, all "c.i.f." terms. These rates are still very low, however, compared to the average quotations of recent seasons.

IODINE.—The combination price for crude is maintained at $9d.$ per oz., but we hear of some further small sales at $8\frac{1}{2}d.$ per oz second-hand. *Iodide of potassium*, $11s. 6d.$ per lb.

IRISH MOSS.—From Liverpool sales are reported, first at the rate of $12s. 4\frac{1}{2}d.$ per cwt. ex quay, and subsequently at $12s. 6d.$ per cwt.

JALAP.—Holders of good heavy jalap require $9d.$ per lb., and we understand that at $8\frac{1}{2}d.$ per lb., which was paid some time ago, further small transactions have taken place. A proof of the decay in the output of this article is furnished by the last official commercial statistics of Mexico, which show that, whereas between 1880 and 1886 the average value of the jalap exports was about \$30,000, only \$19,641 were

shipped in 1885-86, and \$10,926 in the financial year 1886-87. During the latter year 5,542 kilos. of the root went to the United States, 2,698 kilos. to Germany, 1,430 kilos. to France, and 1,256 kilos. to England; 10,855 kilos. of this jalap came *via* Vera Cruz, and only 71 kilos. *via* Tampico.

LEAD (ACETATE).—The combination in Germany are refusing all contracts for future delivery. On the spot best *White* is quoted at 24s. to 24s. 6d., or 23s. to 24s. c.i.f. British ports, according to quantity. *Brown* scarce.

MANNA.—The market remains firm in Italy, the best flake, 1s. 11d.; small flake, 11 $\frac{3}{4}$ d.; Gerace sorts, 8d. to 8 $\frac{1}{2}$ d. f.o.b.

MARSHMALLOW ROOT.—The new crop is now being brought to market on the Continent. For the present the owners still ask full prices, but it is thought that a sensible decline must shortly take place.

MERCURIALS unaltered at 3s. 7d. per lb. for *Calomel*.

MUSK.—It is reported that the German scientist who recently announced his discovery of the method to prepare the active principle of musk by synthesis has sold his invention to a Paris firm for the price of 10,000*l*.

NUX VOMICA.—Our imports since last report have been about 550 packages. The Calcutta market at the end of October was reported practically bare of stock, and prices remain merely nominal.

OIL (CASTOR).—Our market is somewhat easy; good second Calcutta at 4 $\frac{1}{2}$ d. to 4 $\frac{3}{4}$ d.; firsts nominally at 5d. per lb. In Liverpool the market opened rather quiet at the closing price of last week—viz., 4 $\frac{5}{16}$ d. for good *Calcutta* seconds, but a better demand soon set in, and holders refused all offers under 4 $\frac{3}{4}$ d. per lb., and remain steady at that quotation. The arrivals have been rather heavy lately. At the end of October there was an extremely strong demand for castor oil in Calcutta, for shipment to Australia as well as to the United Kingdom. The production of oil had been interfered with to some extent by heavy rains.

OILS (ESSENTIAL).—*Star-anise* oil is dearer, with sales at 6s. 3d. per lb. on the spot. *Cassia*, dull on the spot at unchanged rates, but there is more demand for arrival. American oil of *Peppermint* held for 11s. per lb. for H.G.H. The best Japan oil is held for 5s. 6d. per lb.; but ordinary native brands may be had as low as 3s. 4d. *Menthol* remains inquired for, and the price of Cocking's brand has again been raised to 7s. 6d. to 8s. 6d. per lb., according to quality. Oil of *Bergamot* reported 6d. dearer from Italy at 9s. 3d. per lb., landed terms, for good quality; *Lemon*, 4s. 3d.; *Sweet Orange*, 4s. 5d.; *Bitter ditto*, 11s. 3d. per lb.

OIL (OLIVE).—The London market remains firm, but quiet, for *Spanish* and *Messina* oils, at 36*l*. and 35*l*. 15s. respectively. *Mogadore* oil in better demand and dearer, 35*l*. 10s. being now required. The Liverpool market is very firm, but unchanged, with a limited demand, *Gallipoli* at 42*l*. As regards the fine eating oils, *Bari* is quoted at 4s. 3d. to 4s. 6d., *Leghorn* at 4s. 6d. to 5s., and *Riviera* at 5s. to 5s. 1 $\frac{1}{2}$ d. per gallon, London terms. For cream oils about 6d. per gallon more is asked, but there is very little of this to be had. The new *Bari* oils are due in January, but the *Riviera* and *Leghorn* oils not until February-March. As regards the producing countries, it is reported that the new *Gioja* oil is already commencing to arrive on the Naples market, and is expected to be a very good quality this season. The prices for *Gioja* oil are therefore rather lower. In Sicily the better qualities of oil are scarce, but ordinary grades are lower and neglected. In Crete the new oil is arriving at the ports of shipment, the quality is good, but the oil is not yet ready for export. In Tunis and Morocco very high prices are asked, though from the former country it is reported that the crop is likely to be somewhat better than last season. In Spain there has been a very active demand for Seville oil, which is dearer and still rising, while the Malaga market rules too high for export to England. From the French oil districts the news remains unfavourable.

OILS (VARIOUS).—*Cocunut* oil quiet on the spot; Ceylon, in pipes, 23s. 3d.; *Cochin*, 26s. 6d.; *Mauritius*, in hogsheads, 24s. 6d. per cwt. *Cottonseed* oil rather higher; new crude, 21s. 6d.; refined, 23s. 9d. to 25s. 9d., according to quality; *Hull*, 21s. 6d. for refined, and 20s. for crude; Liverpool re-

fined, 23s. 3d. to 23s. 9d. now asked; yellow American refined selling at 23s. 6d., and 24s. required. *Linseed* oil firmer, and rising, at 21s. 4 $\frac{1}{2}$ d. to 21s. 6d., landed; *Hull*, 20s. naked, spot; Liverpool, 22s. 6d. to 23s., export casks. *Palm* oil very dull in London, with small sales, at 26*l*. for fine *Lagos*; Liverpool also easier, with business at 23s. 6d. for *Lagos* in transit, and a fair business in soft oils. *Petroleum*: American, spot, 5 $\frac{1}{16}$ d. to 5 $\frac{1}{8}$ d.; Dec., 5 $\frac{1}{16}$ d. to 5 $\frac{1}{8}$ d.; Jan.-April, 5 $\frac{1}{8}$ d. to 5 $\frac{1}{4}$ d. Russian, spot, 5 $\frac{3}{16}$ d. to 5 $\frac{1}{2}$ d.; Dec., 5 $\frac{3}{16}$ d. to 5 $\frac{1}{2}$ d. In *Rapeseed* oil the London market closes fairly steady; brown, on the spot, 33s. to 33s. 6d.; refined, 34s. 6d. In Liverpool all the refined *Stettin* oil offering was cleared off the market last week at 34s., and holders now require 36s. per cwt. *Turpentine* firmer; American spirits, on the spot, 34s.; Jan.-April, 34s. 9d. per cwt. Sweet pale *Seal* oil scarce, and dearer and higher rates asked.

OPIMUM.—The market is exceedingly firm, and reports from Asia Minor say that the drought in the producing districts continues, and has prevented the new sowings from being put in the ground. Our market is very firm, old *Druggists'* selling at 11s. to 11s. 3d. per lb., new being wanting. Good *Shipping* opium is worth 14s. 6d. per lb., and has sold at that price, but the holders now require 15s. per lb. The last sales in *Persian* were at 13s. 9d. per lb.

PHOSPHORUS.—Amorphous is dearer, at 3s. per lb., and very scarce; wedges and sticks, 1s. 10d. to 1s. 11d. per lb. respectively.

POTASH SALTS.—There have been some small sales of best Montreal *Potashes* at 21s. at Liverpool, but the market is now dull again at 21s. per cwt. *Pearlashes*, nominally, 31s. per cwt. *Bichromate* steady at 4d. per lb. *Chlorate* has slightly eased off for prompt delivery, and there are sellers at 4 $\frac{1}{8}$ d. per lb., but no buyers over 4 $\frac{3}{4}$ d. per lb. *Prussiate* firm, and rather scarce at 7 $\frac{1}{4}$ d. to 7 $\frac{3}{4}$ d. per lb. for yellow, according to brand. English refined *Saltpetre*, 21s. to 22s. per cwt., according to size of packages.

QUICKSILVER.—The importers' price is maintained at 9*l*. 15s. per bottle, but second-hand holders have gradually eased off to 9*l*. 8s., at which they are sellers to-day. The London first-hand stock at the beginning of this month was estimated in some quarters at 46,000 bottles, against 51,000 on November 1, 1888.

QUININE.—Early in the week there was a good demand, but afterwards the market became rather quiet and slightly easier. Second-hand sales have been made at 1s. 3d. per oz. on the spot, and 1s. 3 $\frac{1}{2}$ d. for February-March, with further sellers at that price. The *B. & S.* agents ask 1s. 4 $\frac{1}{2}$ d. for March, but would take 1s. 4d. for January. To-day 10,000 oz. *Auerbach* sold at 1s. 3 $\frac{1}{2}$ d. for February-March, first-hand. The bark offered for auction this week represented about 210,000 oz. of sulphate of quinine.

SAFFRON.—It is reported that the largest buyers have made their purchases in Spain, and the price may now be quoted at 48s. to 51s. per lb. for fine, and 46s. to 47s. 6d. per lb. for good Valencia. It is thought that these prices may hold good for the rest of the year.

SENEGA.—The new crop is now marketed, and is said to be by no means large, so that, if even an average demand should set in from Europe, higher rates are likely to be seen. But orders from this side of the water are at present very few. The quotations are 1s. 8 $\frac{1}{2}$ d. to 1s. 10d. per lb. c.i.f.

SHELLAC.—The week opened with a very firm feeling, and a good deal of speculative business at higher rates was reported both before and after the auctions, especially in *Garnet AC lac* at 67s. to 67s. 6d. on the spot, and 69s. for January. At the auctions held on Tuesday, the moderate quantity offered, consisting of

	Cases	Cases
Orange lac	377 of which	150 were sold
Garnet "	201 "	201 "
Button "	104 "	— "
	682	351

met a good demand, and was partly disposed of at an advance of 1s. 6d. to 2s. on orange lac, and about 2s. 6d. to 3s. per cwt. on garnet, the latter variety being particularly in request. *Orange lac*, fine but reddish, SD in circle and

octagon B, sold at 84s. to 86s.; fine bright unworked 85s.; ordinary livery to fair seconds, 75s. to 78s. per cwt. *Garnet* AC, good free 67s. to 68s., rather blocky 66s. per cwt. In Calcutta, according to the latest mail reports, nearly all the holders stand out for prices above the current market value. The shipments from Calcutta during the first half of November are eabled at 1,700 cwt. against 900 cwt. in the corresponding period of 1888. At the ring to-day, prices were somewhat firmer, as follows:—

		Nov.	Dec.	Jan.	Feb.	Mar.
Orange TN, sellers ..	..	79/	78/6	100	80/	79/
" buyers ..	..	77/	78/	at 79/	78/	77/6
Garnet AC, sellers ..	..	69/	70/	69/	—	—
" buyers ..	..	67/6	68/6	69/	—	—

The market closes firm, with sales of good second orange on the spot at 79s. per cwt.

SODA SALTS.—*Ash* steady at 1½d. per degree Tyne, and 1¾d. here landed, but for delivery over next year more money is asked. *Bicarbonate* scarce, with good demand at improved rates, say, 5s. 6d. to 5s. 9d. ex warehouse. *Caustic* offering rather more freely, 70-per-cent. spot 7s. 6d. to 7s. 7½d. per cwt., cream 6d. less. *Crystals* dull of sale, but steady at 55s. to 56s. ex ship London, and 46s. to 47s. 6d. on the Tyne. *Nitrate* rather better at 8s. 4½d. to 9s. per cwt., according to quality.

SOY.—There has been a somewhat better demand for *China* soy lately, and business is reported at 1s. 4d. per gallon, an advance of 1d.

SFERMACETI.—There is still a fair demand at 1s. to 1s. 1d. for refined American.

SPICES.—At this week's auctions a quantity of very common St. Vincent *Arrowroot* was sold without reserve, at 1¼d. to 1½d., fair bringing 2¼d. per lb. *Cassia lignea* remains fairly steady, with sales of good quill, 1888 import, at 22s. 6d.; and broken, in bales, at 15s. to 15s. 6d. per cwt., which is rather lower. Common *Cinnamon chips* have been sold at 2¼d. per lb. The periodical *Cinnamon* auctions will take place next week. *Zanzibar Cloves* are not very lively on the spot, with business at 5d. to 5½d. for common dark. For arrival, however, a large business has been transacted, mostly December-February shipment, at 4¼d. to 5d. c.i.f. to London, and 4½d. to 5d. to Continent, delivered weights; good to fine Penangs would be worth 9d. to 11d., and Amboinas, 7d. to 8½d. per lb. on the spot. *Ginger*, Jamaica, in fair demand, ordinary dull to medium washed, 72s. to 76s. per cwt. *Cochin* again somewhat easier; cuttings, 9s. 6d. to 10s.; good hold washed, 19s.; medium to bold cut, 27s. to 48s. per cwt. *Mace*, dull and quiet, with easier tendency, good pale Penang, 2s. 11d. The finest grades are worth 3s. 1d. to 3s. 2d. per lb. *Nutmegs*, depressed and again easier for the bold sizes. Penang (82 to 96), 2s. 6d. to 2s. 5d. per lb. *Black pepper*, flat, and at auction nothing sold. Singapore, for January-February shipment, has sold at 6d. to 6½d. per lb., closing steady at the latter price. *White pepper*, lower for Penang, fair to good, 7½d. to 7¾d. per lb. *Pimento*, easier, and dull grey to fair, 2½d. to 3d.

TONQUIN BEANS.—The new crop of *Angostura* beans is now arriving in New York. The quality is said to be particularly fine and the price moderate. The first arrivals of the new *Pará* beans are also coming forward.

WAX (JAPAN).—This neglected article is said to show some indications of improvement, and small sales of good white squares are reported up to 46s. per cwt., which would be an advance of about 1s. per cwt., but this report should be taken for what it is worth.

SUGAR SYRUPS.—The strength of solutions of sugar in water can be calculated from the sp. gr., and *vice versa*, and the result is accurate to the third decimal place. The calculation is based on the sp. gr. of a 10-per-cent. or 50-per-cent. solution. If S_0 is the sp. gr. of a 10-per-cent. solution, W the percentage strength of the solution in question, and S_x the required sp. gr.,

$$\frac{S_0 - 1}{10} \times W = S_x - 1.$$

The reverse operation gives the percentage strength from the sp. gr.

THE AMERICAN MARKETS.

(From our own Correspondent.)

NEW YORK, November 8.

THERE is a quiet but steady movement in drugs, with large quantities of the leading articles going into consumption. Business generally in this country is very good, and our drug market is not without feeling the effects of this.

CAMPOR.—This important article is attracting considerable attention, and is likely to be very active before long. Formerly the manufacturers of refined contracted with their customers for their season's supply, giving them protection against a decline. This year the makers will not entertain any contracts, even without protection, so that dealers do not know what to do. It is well known that the stock of crude in the States is much smaller than in former years, for manufacturers admit this, and Government statistics show a falling off in the imports of 1889 up to this over 1888 of fully 300 tons. The quantity on the way direct from the East is not as large as at the same time last year.

CASCARA SAGRADA.—The market is much weaker this week, with very little business doing. Prime quality is held for 70s. c.i.f., but there are several parcels of fair quality, not exactly prime, offering at 60s. c.i.f. On the Pacific Coast the price is very firm, as the available stock is small.

OIL OF PEPPERMINT.—The demand for this oil from Europe has been quite large of late, and is certainly absorbing a considerable portion of the crop. For the H.G.H. brand, however, there appears to be very little inquiry, and as holders seem anxious to make sales, and the bears are all the time at work, the market may be quoted lower. It is difficult to give an accurate quotation, for it is impossible to say what would be accepted unless an offer were made. The last sales were made at \$2 45, i.e. 10s. 9d.—per lb. c.i.f. London, but to-day one seller was asking for offers of 10s. 3d., but whether he would accept this price is a question. Mr. Hotchkiss is holding for 11s., and is bottling little oil.

OIL OF SASSAFRAS.—This article has been coming forward more freely, and has declined to about 1s. 10½d. c.i.f. Owing to the greatly increasing consumption of the artificial oil, or safrol, the true oil no longer occupies the position it once did. The consumption in Germany must be nearly altogether supplied by the artificial, for inquiries from that country are few and far between. She used to be one of the largest consumers.

QUININE.—Although very little faith is placed in the cinchona syndicate, the market has improved under the influence of cable advices quoting higher prices paid for bark. The German manufacturers generally quote equal to 1s. 4½d. less 5 per cent., but can do no business, as second-hand holders are selling freely at 1s. 3½d. The demand is very large, and before long, it is thought, will have absorbed all the cheap offerings. There is no speculation whatever in the article. The total import of cinchona alkaloids into the U.S. for eight months, to end of September 1889, is about 750,000 oz. in excess of the same period in 1888, but there is a falling off in the importation of cinchona bark for same period of 1889 of over 600,000 lbs. This goes to show the American factories are not turning out as much quinine as in 1888. It is thought that the consumption is increasing, but is supplied from surplus stock of former years.

SARSAPARILLA.—The stock of *Mexican* root held here is down to 250 bales, or less, owing to the good demand from France and Germany. More than likely this will be taken off the market very soon, and then there will be at last a reaction towards higher rates. For more than two years this article has been steadily declining in price; from 9½c. it has gone down to 5½c., at which sales were made this week. The stock generally has been from 700 to 1,200 bales. As regards *Honduras* *Sarsaparilla*, the high prices have brought large supplies from the South; 130 bales arrived within the last ten days, and 300 more are on the way.



The Sale of Poisons by Unqualified Persons.

SIR,—In submitting some remarks in opposition to the view you have expressed on this question, allow me first to disclaim any intention of raising opposition to the Council of the Pharmaceutical Society. No object or purpose of mine would be served by so doing; as a representative body it should command our respect. It has been placed in a somewhat awkward position, and has taken a course which it is unnecessary for us to commend or censure. The subject is one of considerable importance to every person engaged in pharmacy. In endeavouring to elucidate the matter the operation will be rendered more simple by recognising the fact that it naturally divided itself under two heads, one only of which concerns us at present. At some future time it may be profitable and proper to discuss the advantages which may accrue to the public and ourselves from this or that reading of the present or a new Act—but with that we are not now concerned. The question we have to deal with is, What was and is the intention of the Pharmacy Act as it stands with regard to the sale of poisons by unregistered assistants of registered persons? In other words, Who is the seller?

There are two views concerning this matter, one which holds that the person who actually hands over an article to the customer is the seller, and this for convenience we may call the "personal" view; and the other, which holds that the seller and responsible person is he who owns and conducts the shop or pharmacy, and that he may either sell by his own hands or authorise an assistant or apprentice, not necessarily registered, to deliver the articles to the purchaser. This may be termed the "delegate" view. My object is to show why I believe (as I do most earnestly believe) that the intention of the Act was, and is, to recognise the latter condition of things, and I hope to prove this by both circumstantial and direct evidence. To get a correct view of the matter it is necessary to first look at the state of things which existed in 1868, when the Pharmacy Act was passed. There was the Pharmaceutical Society, a comparatively small though important body, with permissive examining powers; there was the Society of Chemists and Druggists; and outside these organisations lay the great mass of the trade. It would, I think, be safe to say that at that time nine out of every ten assistants were unexamined. They were some thousands in number, all with vested interests which had to be provided for. These interests were of two kinds—existent and prospective. They were actually following a calling, filling situations, earning a livelihood—they had also the prospect of going into business. For the first they had every possible claim to consideration, for the second they had a weaker case. How does the Act deal with it? In Clause 4 it provides that all assistants 21 years of age who had been three years employed by chemists should, "on passing a modified examination, such as should be considered sufficient evidence of their skill and competency to conduct the business of chemist and druggist, be registered." This clearly was a provision for their prospective rights. But what of the existing rights? Can it be supposed for a moment that it was contemplated to turn all these men out of their situations (together with those who had been less than three years so employed) until they had passed this modified examination? Can it be supposed that the Act contemplated taking from them their bread, and that they, calmly and in humble submission, stood by when the faintest resistance would have sufficed to have thrown out the Bill?

At the time, too, there were hundreds of apothecaries, with open surgeries or shops, selling poisons retail at the hands of unregistered assistants; and clause 16 of the Act provides that "nothing hereinbefore contained shall interfere with the business of any apothecary"; so that apothecaries did, and still can, sell poisons at the hands of unregistered persons. Now, had those who framed the Act contemplated depriving the unregistered chemist's assistant of his livelihood, surely the safety of the public would have required that the same

should apply to the unregistered assistants of the shopkeeping apothecaries.

This leads us to consider who was responsible for the Act. It was not framed for us by any opposing organisation, not by the Government, but by members of our own body. It was a compromise between certain Government requirements as to the conditions under which poisons should be sold, together with the two Societies and the trade generally.

There are many persons still living who took an active part in the construction and consideration of the various clauses. I have discussed it with some of them, and, further, I can state from personal knowledge and experience that it was never contemplated to interfere with the employment of unregistered assistants by registered masters. The solicitor of the Pharmaceutical Society who actually had to do with preparing the Bill, and watched it at the time of its passing, has said to me, and has repeated in my presence on more than one occasion (referring to the Pharmacy Act and the stores)—"The master qualifies the servant, but the servant cannot qualify the master." Why has all this so suddenly changed? From the time the Act came into force to the present date, under successive Councils, prosecutions of various kinds have been authorised almost monthly, but no prosecution of this kind has been initiated during the twenty-one years until now—in fact, the Council has never believed that the statute contemplated such prosecutions or conferred on it the power to conduct them. It may be argued that, to a great extent, this is circumstantial evidence, that we must take the Act as we find it, and deduce the meaning therefrom.

For this I am fully prepared: but let me say that, had the judges who have on side-issues expressed opinions in favour of the "personal" seller view, been conversant with the history of the Act, and the surroundings, and the time of its birth, they would have held very different opinions.

Looking at the Pharmacy Act, we nowhere find it contemplating a qualification for assistants, except in the case of managing the business of a deceased chemist. The first suggestion for two grades of chemists with which I am acquainted was made by myself at an evening meeting of the Liverpool Chemists' Association some years before the passing of the Act, and I certainly did not suggest that either of these should be an assistant's qualification.

The preamble of the Act recites that "it is expedient for the safety of the public that persons 'keeping open shop' for the retailing or compounding of poisons, known as chemists and druggists, should possess a competent knowledge of the business, and to that end persons not already engaged in the business should, before commencing such business, be examined." This clearly contemplates conditions for those who should carry on the business, but not for assistants.

In 1880 (twelve years after the passing of the Act), during the trial of the Pharmaceutical Society *v.* The London and Provincial Supply Association, the Lord Chancellor expressed an opinion that it was the intention of the Act to hit at the actual person who handed the poison to the purchaser, whether master or assistant, and some other judges have held the "personal seller" view—clauses 1 and 15 furnishing the ground for such opinions. Let us see what these really say. Clause 1: "From and after the 31st December, 1868, it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, compounding," &c. Clause 15: "Any person who shall sell or keep open shop for retailing, dispensing, or compounding poison, or shall take, use, or exhibit the title of chemist and druggist, or chemist or druggist," &c. Now what does all this mean? It has not the most remote reference to an assistant, and cannot, by the most strained rational reading, be made to have. It is the usual tautology occurring in legal documents and Acts of Parliament, and is simply the means taken by our fathers in the trade, who passed these clauses, to hedge about and protect those who should afterwards follow the calling. As thoughtful and intelligent men they knew that in due course there would be those who would attempt to evade the Act (would, perhaps, sell otherwise than in a shop, would use a title similar to that of chemist, &c.), and so they used this kind of tautology to protect the legitimate members of the trade. The person (under the Pharmacy Act) who sells, keeps open shop, or uses titles is one and the same person. The words, "any person who shall sell," cannot be justly

and properly detached from the others, and made to mean something else. Is it probable that intelligent men, who were practical pharmacists, would have intended to thus hit at the assistant who should hand over, say, a bottle of mixture containing a poison, to the purchaser, whilst the compounding of that medicine may, so far as the Act is concerned, have been done by the errand-boy, if the proprietor so pleased? Clause 15 further says that a penalty of 5*l.* shall be incurred by anyone who "shall compound any medicine of the British Pharmacopœia except according to the formularies of the said Pharmacopœia;" and if this clause hits at the counter-assistant where it says "person," it must hit at the dispenser in this regulation for compounding, and he it is who must be sued for the penalty in the event of a breach of the same. And yet this man cannot know whether all the preparations he uses are made in strict accordance with the Pharmacopœia. Here again it is self-evident that the master and not the assistant is intended to be the person responsible to the public and amenable to the law. In clause 17 we find the following:—"And for the purposes of this section the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller." It has been argued that this implies that in other sections the reverse is the case. But this is merely an inference, and it is just as reasonable to suppose that it means what it says, and implies nothing more. The clause refers to certain labels, and to such bearing the name and address of the seller; and these words define unmistakably whose name is to go thereon. But they do something more: they recognise and indirectly authorise the sale of a poison by an apprentice or servant. Now an apprentice is not a qualified or registered person, and it is clear that there is no intention in the Act of demanding registration from the servants of registered persons—in fact, so far as clauses 1 and 15 of the Pharmacy Act are concerned, assistants *bonâ fide* in the employ of registered proprietors are not persons; they lose their identity so far as the public are concerned; they become factors in the establishment to which they belong. The public look to the proprietor as the qualified and responsible person, and in so doing comply with the spirit and intention of the Pharmacy Act. The judges have not been unanimous in their interpretation of the clauses specially referred to. Mr. Justice Groves held in the Trafford case that the person who superintends the sales and manages the business is the seller, and not necessarily the person who hands the article to the purchaser; and this is the latest authoritative and doubtless correct view of the meaning of the Act.

I am, yours faithfully,

Liverpool, November 18.

CHARLES SYMES.

SIR,—Judge Holroyd's interpretation of the fifteenth section of the Pharmacy Act will appear to many chemists as an exceedingly inconvenient way of looking at it, and those who feel the pinch of the shoe will perhaps strongly protest against it. But a little consideration will show that the inconvenience which some chemists will experience from obeying the law in its new light will be far outweighed by the advantages which the trade generally will derive from its application. In fact, the Pharmacy Act has been shaken to its foundations, and converted from a ridiculous law that severely handicapped the chemist, while it left loopholes for all sorts of unqualified traders to evade it, into one securing for the chemist a real protection—one that he needs, but cannot expect to obtain by any Pharmacy Bill savouring of trade protection.

The intention of the framers of the Pharmacy Act of 1868 was probably that the "proprietor" should be qualified, and should cover his employes; but their ideal "proprietor" would most likely have been the man who actually superintends his business. It is also probable that they never dreamt of seven unqualified persons forming a company, and snapping their fingers at the law. These oversights must be remedied, either by new laws or by new readings of old ones.

The intention of the law administrators of to-day evidently is that the Pharmacy Act shall be interpreted as a measure having for its sole object the protection of the public from the accidental or intentional misuse of poisons; and this can only be secured by insisting that he who compounds

prescriptions, and he who hands poisons over the counter, shall be qualified.

In the interests of the public Judge Holroyd's opinion should be supported, for what safeguard has the public against a grocer who arranges with half a dozen of his friends to distribute potent drugs through salesmen who know nothing of their properties? The public has also a right to be protected from the chemist who leaves his business in charge of an apprentice, and never goes near it himself except to draw the profits.

In our own interests Judge Holroyd's opinion deserves hearty support, for if the "seller" must be qualified, it follows that in all establishments where poisons are sold they must be handed over the counter by a qualified chemist; then, whether the sale be conducted in a store, dispensary, or open surgery, it matters not, for we should all be on equal footing, and have no greater enemies than our friends.

The question, "How will the new reading of the law affect chemists?" seems to me to have no serious aspect for principals; those who employ one or more qualified assistants will scarcely feel its effect; those who really cannot afford to keep a qualified assistant, but take an apprentice, will have no greater hardships to endure than those which have to be submitted to by those who conduct their businesses single-handed. If a chemist leaves his business in charge of an unqualified person no poisons should be sold during his absence. Branch shops should have qualified managers. Unqualified managers will be rather awkwardly placed, but I believe that most of them would pass the Minor if they "made an effort."

I trust that the members of the Pharmaceutical Society will give their Council abundant support in the step they have taken, for I am convinced that this view of the Act will make it of real value both to the public and to the qualified chemist.

Yours very truly,

35 Clifton Road, Maida Vale, W.

R. H. PARKER.

SIR,—Together with, I venture to think, a very large proportion of chemists and druggists in business, I look very seriously at the recent decision at the Wandsworth County Court. I do not agree with the Editor in his notes of this week that probably the Sheffield meeting, which shows equal numbers for and against the action of the Pharmaceutical Society, "will prove somewhat about the general proportion of opinion." The very class of chemists most affected are the small traders, who cannot keep a qualified assistant, and who could not attend such a meeting, and will by this decision be prevented ever leaving their shops, unless they shut them up.

I would point out that, although the defendant in this case sold Battle's vermin-killer, every sale of poison, from a pennyworth of paregoric upwards, if sold by a junior or apprentice, will be illegal. It was pointed out to chemists in 1868 what a grand thing it would be for the trade to be the sole retailers of poisons, and many were induced to join the Pharmaceutical Society on those grounds. Should they still remain members they will see what a grand mess they are landed in.

The word "sell" in sections 1 and 15 of the Act was, I believe, intended by the framers to refer to street vendors of medicines outside shop, and I venture to think that if reference can be had to speeches by the Council at that date this will be found to be the case. Note there is no stop until the word "retailing" is reached. Had the Pharmaceutical Society before held the opinion they now express, no doubt they would long ago have tried their hand at a prosecution. They seem ever ready to further harass their supporters.

I sincerely hope the trade will have enough "go" in it to subscribe to a fund to defray the costs of appeal. Let us have a meeting and appoint a committee. Will somebody act as secretary *pro tem.* and receive subscriptions? I would myself take the duty, but unfortunately am just now, like many others, obliged to personally look after my own business. I will, however, gladly hand over a guinea, or more if necessary, to fight the question out, and I am sanguine of success.

Yours truly,

818 Holloway Road, November 16.

J. H. READ.

P.S.—No time must be lost. Twenty-one days only are allowed in which notice of appeal can be given.

SIR,—Is there not a growing feeling that the chemist of the future should make his living, not merely by buying drugs and selling them at as big a profit as he can get in these days of cheap stores and trade competition, but that he shall be able to understand how to make and test his goods? I do not mean to say that before a man is qualified he is not a fit person to sell Battle's vermin-killer, or that he should be able to analyse and define the percentage of the respective portions of dangerous substances contained therein. But I hear some unqualified assistant of ten or twelve years' experience say to some young fledgling fresh from his college and Minor, "What do you know about poisons, with your few months of cram, compared to my years of practice?" Has not the small torpedo-boat, devised from recent science, proved more than a match for the gigantic ironclad? So, also, a five minutes' look at THE CHEMIST AND DRUGGIST with regard to the sale of methylated spirit would go farther towards keeping you out of the meshes of the law than attending all the political meetings known or reading the columns of the *Times* parliamentary reports with the regularity of clockwork. But how about the expense of keeping qualified assistants? The stores will have to do it as well as you. Keep out of the net of the law and you will not regret it.

Respectfully yours,

PALMAN QUI MERUIT FERAT. (178/69.)

SIR,—Looking at section 15 as a student of English, I do not see how you arrive at your interpretation of it. The section seems to me to create five offences—and five only. I read it thus:—"Any person who shall (1) sell or keep an open shop for the retailing, dispensing, or compounding of poisons; or (2) who shall take, use, or exhibit the name or title of chemist and druggist, or chemist or druggist, not being a duly-registered pharmaceutical chemist, or chemist and druggist; or (3) who shall take, use, or exhibit the name or title pharmaceutical chemist, pharmacist, or pharmacist, not being a pharmaceutical chemist; or (4) shall fail to conform with any regulation as to the keeping or selling of poisons made in pursuance of this Act; or (5) who shall compound any medicines of the British Pharmacopœia except according to the formularies of the said Pharmacopœia, shall for every such offence," &c. It will be seen that each of the clauses I have numbered (each of which names a distinct offence) is introduced by the words "who shall," except clause 4, where the relative is—apparently by an oversight—omitted. Before these words "any person" evidently requires to be understood. The section, in fact, grammatically construed, reads thus:—"Any person who shall sell or keep an open shop, &c., or any person who shall take, use, &c., or any person who shall," &c., &c.

My point is now clear. It is that the word "or" in clause 1 does not introduce a distinct offence, but merely a definition and an amplification of the first offence. We cannot read it thus—"Any person who shall sell, or any person who shall keep an open shop," &c., without as great a departure from the actual sense as would be caused in the second clause by reading it similarly—"or any person who shall take, or any person who shall use," &c. The two cases seem to me exactly on all fours with each other, and one can easily see why in each there is an exact definition and amplification of the original phrase. In clause 1 this is to prevent any person selling otherwise than in an open shop, and to ensure the conviction of a person keeping an open shop, even although an actual sale cannot be proved. The offence, however, is one and the same; the whole construction of the section forbids the idea that two persons are aimed at in this clause, viz. the proprietor of the shop and the person selling for him.

I have only to add that I shall be ready, if required, to contribute my share, along with others, to the expenses of the defendants' appeal in the Wandsworth case.

Epworth,

November 19.

I am, &c.,

C. C. BELL.

SIR,—May I ask who is the seller under section 15 of the Pharmacy Act? The answer, according to the recent decision, in which you acquiesce, is the person who conducts the sale. Then, I ask, who conducts the sale in the following instances?—

(1) A is a qualified chemist, keeping open shop, and has an apprentice, B. Enter a customer for 1 oz. of laudanum. B takes the order in A's presence, and proceeds to put up the tr. opii; A, engaging the customer in conversation the while, succeeds in selling him sundry other articles. B is about to hand over the laudanum, when customer says he will have all sent together. A calculates the amount owed, B takes the money, and goods are delivered at customer's house by errand-boy. Who was the seller?

(2) A is out for a constitutional when a customer enters his shop for the above poison. B, having been put on his guard by the recent decision, and being unwilling to turn a customer away, explains that his master is out, but he will send it for him directly A returns. "Very well," says the customer, "and put it down to my account." A returns, and on hearing B's explanation of the occurrence instructs him to put up the laudanum and send it. The errand-boy delivers it. No money changes hands for, say, six months. Customer might take the poison that night, and I think it would puzzle even his Honour of the Wandsworth County Court to decide who was the seller?

(3) Our customer (presuming he has not taken the last dose) enters an establishment carried on on the store system, and requires more laudanum. An unqualified assistant takes down his order in the usual store style, and, undertaking to send it, hands the invoice to customer, who pays the amount to the cashier in the desk. The laudanum is duly sent out, and delivered by the stores van-man. Who was the seller?

(4) A customer, having given an order as in (1), finds he has no cash in his pocket, and says he will pay on delivery. The errand-boy delivers the goods, including the poison, and receives the money. Who was the seller?

I am not a legal luminary, but I certainly think the above instances will serve to explode the "person who conducts the sale" theory by means of the good old process invented by—Euclid, Esq., to wit, *Reductio ad absurdum*.

Yours truly,

ANGLO-IRISH. (179/4.)

SIR,—Those who are opposed to the more stringent working of the Sale of Poisons Act will, doubtless, advocate their views as zealously as was done in the case of the proposed branch-shop clause, and I desire to say that it is of vital importance that those who differ from them should put forward their views with at least equal energy. The essential principle adopted in pharmacy legislation is involved; the purpose of that legislation was, in the public interest, to secure the services of competent men to undertake the dispensing and sale of poisons, the only recognised test of competence being the Pharmaceutical Society's examinations. It would be waste of time and space to argue upon the meaning of the words of the Act where the seller is referred to: that is decided for us by those who administer the law. If the law is a good one it should be enforced; if a bad one it should be amended. Do chemists desire that illegal sales should be allowed over their counters which would not be tolerated in other establishments? This is so palpably absurd that argument upon it would appear to be unnecessary. Such a demand for exceptional privileges may be dismissed as unworthy of reasonable men. The point is—Shall unqualified men sell poisons or shall they not?—no matter whether the business be a chemist's, draper's, or surgeon's retail. If permitted in one, it cannot be taken objection to in another. The Pharmaceutical Society cannot put away from themselves the obligation to enforce the Act that is laid on them, and it is obvious that an attempt to amend the Act as I have indicated would mean a repeal of the Pharmacy Acts. And let those who, while grumbling at competition, say that chemists were better off before these Acts came into operation consider what their chances would be if all restrictions were removed. The business of chemist and druggist would be carried on as a department in every large draper's and grocer's in the country. The selling of poisons by unregistered men must be prevented or—legalised; there is no middle course.

The main objection to the recent action seems to be that if carried to an extreme it would be inconvenient to a large number of chemists who have small businesses. Many existing laws could be reduced to an absurdity if enforced to their extreme limits, but which, enforced with discrimi-

nation, are good and useful laws, and we have no reason to suppose that the Poisons Act would be worked otherwise than discreetly. No chemist who exercises reasonable care in conducting his business need fear captious interference.

The interests of registered chemists and of the public are identical, and, the better protection we give, the firmer our ground in objecting to the practice of pharmacy by limited companies, who are not persons. Let the Pharmaceutical Society keep back their Curriculum Bill until they can show that chemists' own businesses are properly conducted, and that their branch shops are not managed by apprentices or unqualified assistants (the Poisons Act already existing will enable them to effect that), and then at the same time apply for an amended definition of the word person as applied to pharmacy law. The next move would be a considerable extension of the poisons list. But I believe it to be vital to us that behind the counters of qualified owners the business of pharmacy should be legally and carefully conducted.

As to the unregistered men themselves, they have not been ignorant of what was before them; they have known that no amount of experience or of good references is recognised by law in the absence of the examiner's certificate. They have misapplied time which ought to have been used in perfecting themselves in the calling they adopted, and I do not see why consideration for them should enter into the matter at all. They have neglected to look after themselves, and it is not to be expected that the onward progress of pharmacy and pharmacists is to be blocked because of them.

Yours faithfully,

Liverpool, November 19.

Nux. (178/73)

SIR,—Judge Holroyd evidently confined himself to the strict reading of section 15 without admitting the qualification of the context of the Act as in section 17, unless we may accept his expression of the hope that the matter would be carried to a higher Court as admitting that there existed a strong doubt as to his interpretation of the Act and good grounds for an appeal. After twenty-one years' acceptance of the Act as meaning that poisons may be sold in the shops of qualified chemists by persons perfectly fitted by experience and knowledge to do so, but who are not legally qualified, it seems somewhat late in the day to institute prosecutions which aim at a revolution in the trade.

How many men are there not, like myself, with some twenty-four years' experience—experience gained in the best possible fields, and with my eyes open—who are well fitted to sell or dispense any medicines, more carefully and correctly, probably, than the legally qualified youth of 21 or 22 years of age, whose livelihood would be lost, were the Act read and accepted as in the case under notice. In fact, it would mean that every assistant must be legally qualified, and that the supply of chemists must cease, as it is obvious that apprentices would be rendered almost useless by their inability to serve at the counter; and I don't suppose you would go so far as to advocate boys being legally qualified on signing their indentures, and so becoming full-blown vendors of poisons according to law, in the place of assistants qualified by experience, care, and steadiness.

If you will take charge of contributions to carry the matter into a higher Court I shall have pleasure in sending you 10s. at once as a subscription from

AN UNQUALIFIED ASSISTANT. (178/50.)

177/21. R. T. R. asks:—Should the law as interpreted by Judge Holroyd be enforced, what is to become of the improvers and juniors, who are unqualified simply for the reason that they are not allowed to qualify? If the law prohibits an unqualified person from retailing, dispensing, or compounding poisons (as it undoubtedly does), they will in all probability find their services at a discount. He suggests as a remedy that candidates for the Minor examination shall be allowed to present themselves at 18 years of age instead of 21, and so give the junior, who has passed the Preliminary and has been practically engaged in the dispensing of prescriptions for three years, a chance of becoming qualified.

Lexion (179/57) advocates that the Pharmaceutical Society should get the Act amended to enable persons under the

age of 22, who shall prove to the satisfaction of the Society that they have been duly apprenticed to a pharmaceutical chemist, or chemist and druggist, for a term of not less than three years, and who shall have passed the Preliminary examination, or its equivalent, to be deemed qualified to vend poisons for the actual seller. And he would add medical jurisprudence to the Preliminary subjects.

SIR,—I agree with you that the decision of the Wands-worth County Court Judge is in accordance with the words and spirit of the Pharmacy Act. The inconvenience to chemists who properly attend to their business will, in my opinion, be hardly worth mentioning. In the first place the sale of poisons which require to be registered would probably be very small in businesses where there is not a qualified assistant. And, secondly, the chemist would have only to forbid the sale of any registered poison by anyone but himself or his qualified assistant; and this would be likely to do him more good than harm, as it would have a tendency to raise the opinion of the public concerning qualified chemists. We must remember that this section of the Pharmacy Act is especially intended as a protection to the public.

KOSMAK. (179/59.)

SIR,—With your kind permission I will correct the wrong impression your condensed report of my remarks at the Sheffield meeting last week may make. "His opinion was that the phrase in the Act which said, 'Any person who shall keep open shop'; this should read—"who shall 'sell'" (not "keep open shop"). And, again, "Any person who might sell poison in the open air" should read—"who might sell 'elsewhere,' as, for instance, in the open air."

Such words attributed to me, you might well say in your leader, "Mr. Preston understands the expression 'keep open shop' to refer to persons who sell goods in the open air."

I need hardly say no such puerile thought ever entered into my mind.

4 High Street, Sheffield,
November 20.

Yours faithfully,

J. PRESTON.

Foggy Legislation.

SIR,—Will you or any of your readers kindly explain the meaning or interpretation of the largest, and apparently the most unimportant, section of the Pharmacy Act—viz., seventeenth section—and what is meant by the terms "apprentice or servant"? Either would be a deputy. But if, as section 15 says, "the person who sells is alone responsible," sale by deputy is illegal. Of course, if section 17 means nothing, which obviously is the case, having regard to the recent decision, it should be expunged.

The Council of the Pharmaceutical Society are to be congratulated on the fact that after twenty-one years they have discovered that they possess an Act by which offenders can be dealt with.

I remain, sir, faithfully yours,

H. (177/55)

The Title "Veterinary Chemist."

SIR,—We observe you say in reply to "Gundulph" in your issue of November 9, "We do not think the description veterinary chemist could be brought within the prohibited degrees," and we do not see any further reference to the matter in last Saturday's CHEMIST AND DRUGGIST, so write to say that, whether legally or not, the R.C.V.S. does object to the use of the title by persons unconnected with that body. Having described ourselves as "veterinary chemists" in the advertisements of our "Bird's Botanic Essence" and other equine medicaments, we received a circular from the secretary calling our attention to the fact that we were not qualified to make use of the title; and, although we had great doubts as to whether the college could legally prevent our use thereof, we did not consider the matter sufficiently important to contest, and accordingly consented to eliminate the word "veterinary" from our advertisements and future publications where its connection would give any impression that we were holders of a qualification from the college.

Thinking our experience might be interesting and useful

to your readers, and apparently a slight addition to your already encyclopædic fund of valuable information,

We are, yours truly,

BIRD & STOREY.

42 Castle Street, Oxford Street East, W., November 19.

Medical Practitioners and the Pharmacy Act.

SIR,—I venture to dispute your opinion given in reply to "Mag. Cit." in last week's issue. A medical man may carry on business as a chemist and druggist, but he is not a chemist and druggist within the meaning of the Act; see section 3. As I read section 16 it is only the business of a deceased chemist and druggist, as defined in section 3, that can be continued by the executors, provided they employ a legally qualified manager. I am, yours, &c.,

Edinburgh, November 16. PHARMACIST. (177/37.)

["Pharmacist" is an authority whose opinion on the Pharmacy Act we highly respect; but in this instance we maintain our own interpretation. The question raised was whether the executors of a medical practitioner who had carried on business as a chemist and druggist were entitled to carry on that business under the conditions named in section 16. There is no doubt that by the amending Act of 1869 medical practitioners may, if they please, call themselves chemists and druggists, and carry on such businesses without being registered. The sixteenth section of the 1868 Act says, "upon the decease of ANY pharmaceutical chemist or chemist and druggist actually in business at the time of his death, it shall be lawful for any executor," &c. "Pharmacist" says he reads the section as applying only to the businesses of chemists as defined in section 3; but there are no words in the section to justify him in so reading it, and in construing a penal Act neither he nor a magistrate may read into a clause any words or expressions not actually therein contained. In other words, the Act must be interpreted with absolute strictness. The question would be, was the deceased legitimately in business as a chemist and druggist at the time of his decease? If he was, he has the right given to "any" chemist and druggist in section 16.—*Ed. C. & D.*]

Pure Cod-liver Oil and the Medicines-stamp Act.

SIR,—About twelve months ago I wrote you about a cod-liver oil label the Board of Inland Revenue had returned as liable. Acting on your suggestion I disputed it. After waiting a very long time (during which they promised not to take further steps), I received a note to the effect that "pure cod liver oil is within the exemption. The label returned had been inadvertently marked with the wrong stamp, and the one now returned was properly marked, 'Not liable to duty if a pure drug.'"

N. S. (178/26.)

Unguentum Resinæ.

SIR,—Judging from your reply (November 9) to "Nitram," I gather that his experience in the preparation of unguentum resinæ has been the same as mine. I have for a considerable time noticed the difficulty—impossibility, in fact—of completely melting samples of resin answering to all appearance the requirements of the B.P. What has come over the article I do not know, for it used not to be so. The question, by-the-by, would deserve a place in the Blue List.

I have ventured of late to substitute for "resinæ" another Pharmacopœia article, "Thus Americanum," in this preparation, and with apparently the best results. It requires, perhaps, a little more careful straining, but a wad of tow in the funnel is sufficient for the purpose. Dry and brittle pieces of the "gum" should be selected, or traces of oil of turpentine would be introduced. With care in this respect one might, I submit, venture on the modification of the formula—

In the manger of dowie Redwood,
And alle that ever with him be.

T. B. G. (178/49.)

Charge for Hire of Water-bed.

SIR,—Per single week I have known 2s. 6d.; for longer period, averaging into months, 1s. per week. I make such charges myself.

GILGEN. (177/13.)

Erica (179/18) says:—"As far as my experience goes the charge for the hire of a full-size water-bed is 5s. for the first week, and 2s. 6d. per week afterwards. In long periods a reduction in accordance with circumstances is usually made."

Dispensing for Surgeons.

177/13. *Gilgen* says:—"A simple and somewhat general system in charging surgeons for dispensing is as follows:—Mixtures, 1d. per oz.; drops and liniments, 3d. per oz.; pills, 3d. per dozen—bar patents."

Erica (179/18) says:—"Sigma" must be guided by his doctor's prescribing. One man will put as much value in a 3ij. bottle as another will in a 3xvj., and therefore I would not quote before looking over his books. The prices charged to a medical man who sent in from 40 to 60 a day were:—

3vij. mixtures, 8d.	3j. mixtures, 4d.
3vj. " 6d.	3ij. ointments, 9d.
3iv. " 5d.	3i. " 6d.
3ij. " 4d.	Pills, 3d. per dozen.
3ij. " 4d.	

Exceptions in the case of expensive drugs.

Wholesale Loyalty.

Mr. S. Stephens (Huddersfield) sends us copy of a letter which has been handed to him, with an order for a 4s. 6d. bottle of zymine tablets. The letter was from Burroughs, Wellcome & Co. to a lady correspondent, informing her how the tablets were put up, and adding "that we ourselves only supply our goods to the trade and medical profession. We feel sure that any of our preparations you may require you will be able to obtain from your regular chemist, who, if he does not happen to have same in stock, will procure them for you either direct from us or through his usual wholesale house."

Orders by Halfpenny Post.

Messrs. Bourne, Johnson & Latimer write that they are frequently surcharged on orders sent by halfpenny post, and they send us a letter from the secretary of the Post Office explaining this. The secretary says (352,488, November 15, 1889):—"To pass by book-post orders should be in no way of the nature of a letter; but should, in strictness, consist merely of the sender's name and address, and a list of the goods required, with 'Order' simply written or printed at the top. The order in question, beginning as it does with the direct personal request, 'Please forward,' is regarded as of the nature of a letter, and liable, therefore, to letter postage."

MISCELLANEOUS INQUIRIES.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

175/23. *E. B. Ford*.—Bleaching sponges. See July 20, page 99.

175/21. *J. P. Harrison*.—Acid glycerine of pepsin. See DIARY 1889, page 166.

177/31. *Fides*.—Sulphur Hair Restorer.—See March 16, 1889, page 371.

176/66. *W. Bossinger* (India).—You cannot obtain the British pharmaceutical diploma by any other means than by passing the examination either at London or Edinburgh. No colonial or foreign certificates are accepted in lieu of it.

132/39. *Rhei*.—(1) The mixture keeps perfectly for three months. (2) Use the formula for damask rose tooth-paste given in our issue of December 22, 1888, page 867. Use oil of cinnamon in place of otto of rose.

174/7. *Justitia*.—As we happen to know that your statement of the case is not a correct one, we must decline to print your letter.

173/51. *Improver*.—Do you think it would be quite fair if you had devoted time, skill, and money to make a preparation popular, that we should do our best to destroy the results of your enterprise?

147/12. *Aletis*.—We do not know the articles you name, and we do not receive the *Family Doctor*. You should write to that paper for the formula of the quinine snuff which it recommends.

177/17. *Photographic Chemist*.—If you take photographs for amusement only you are an amateur; if you make money by the art you are a professional. You may sell photographic chemicals and be an amateur photographer at the same time; but if you teach photography practically you would be, we should consider, a professional.

173/31. *A. U.*—You will find that there is enough in the lecture for the time at your disposal. If you have any time to spare at the end show the colour reactions of some substances, such as boric acid, lithium citrate, sodium chloride, and the like, by burning $\frac{1}{2}$ oz. of methylated spirit (saturated with the substance) on a soup-plate. Have a separate solution of each substance and burn each separately. You might also have a few blasts of magnesium powder; show the violet colour of iodine vapour by heating a little in a large flask (dry). Repeat some of the oxygen experiments.

170/5. *Nemo*.—There is no solvent that we are aware of.

131/25. *In Dubiis*.—(1) **Popular Synonyms**.—"Sulphur copperess" (sulphate of iron). "Tincture joicers" (we do not know. "Verjuice" is vinegar. Is there any connection?). "Essence of life" (balsam of life is tr. benzoin co.). (2) The letters are of no value. Probably L.A.S.A. means Licensed Assistant of the Society of Apothecaries, and A.R.P.S., Associate of the Royal Pharmaceutical Society. We have seen the latter before.

167/63. *E. E. U.* (Kimberley).—The best way of utilising animal fat as a machinery lubricant is to bring it down to the consistence of a cream with castor oil.

169/25. *W. T. J.*—**Finings**.—Take of isinglass (brewer's) 1 lb., strong acetic acid 1 pint. Place both together in a suitable jar, and allow to remain until the whole of the acetic acid is absorbed, then add a pint of water and stir well. When this is absorbed a gallon of water may be added, and after mixing well and allowing to stand over night, the finings should be passed through a coarse hair sieve. In this condition 1 lb. of the material is the representation of a gallon of finings, and should be mixed when required with that quantity of the liquid to be clarified. Red dye for bricks is somewhat out of our line, but if anyone who knows cares to send the information for you we shall gladly publish it for the benefit of all.

174/18. *Dobbler*.—(1) **Lip Salve**.—White wax, 1 oz.; lanoline (anhydrous), $\frac{1}{2}$ oz.; almond oil, 2 oz.; alkanet, q.s. Digest together at a gentle heat for an hour, then strain, and stir until it is of creamy consistence, then add 20 drops of Peruvian balsam and 6 drops of otto of rose. May also be coloured with ammoniacal solution of carmine. (2) For transparent nutritive pomade give petroleum jelly suitably perfumed.

173/58. *A. D. G.*—**Mother's Friend**.—A 6-oz. mixture is intended. The formula should read as follows:—

Oil of dill	8 minims
Spt. of sal volatile	1 drachm
Light carbonate of magnesia	1 "
Water	4 oz.

Mix the carbonate with the water and dissolve the oil in the spirit. Mix together, shake occasionally for an hour or two and filter; to the filtrate add

Bromide of sodium	20 grains
Bicarbonate of potash	30 "
Comp. tincture of cardamoms	$\frac{1}{2}$ oz.
Syrup of red poppies, 2 oz. (or a sufficiency to make 6 oz.)	

Dose: A teaspoonful.

174/45. *Aqua*.—We have not seen the powder. What is it like?

174/66. *Papain*.—**Iridin** is a "resinoid," or extractive, with the addition of some inert and insoluble material to keep it from caking. We have made an active tincture with rectified spirit 2 parts, and water 1 part. The strength may be 20 grains to the ounce. It is proportionately more active in the liquid than in the pilular form.

174/59. *Cicero*.—In the issue of November 24, 1888, and four subsequent numbers, you will find hints in regard to affixing labels to tin.

174/60. *Nemesis*.—We have published paragraphs in which analyses of Sequah's preparations were given, but as far as we could judge these did not at all approach to the true composition of the articles.

143/6. *Musical*.—Sims Reeves uses a single glycerine jujube before he sings. Follow his example or use voice tabloids.

175/39. *Roborans*.—Crawshaw makes a black wool dye.

173/23. *Radix Rhei*.—(1) The liquid, we judge from your description, to be what you say, a mixture of Goulard's solution and spirit; but an application of belladonna would be more effectual for drying cows of their milk. Try the ointment, or the liniment, which is cleaner. (2) **Red Water in Sheep**.—Hæmaturia is generally treated by giving at the outset a purgative—Epsom salts with a little ginger, or, better, castor oil. Then a tonic should be given, a good one being:—

Liquor ergotæ	3j.
Liq. ferri perchlor.	3ss.
Glycerini	3ij.
Inf. gentian conc.	3iss.
Aq. ad	3xxiv.

M.

Half a wine-glassful of this to be given twice a day.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

173/57. Can anyone tell why honey is put in some formulæ for lavender water?

177/57. Who makes sulphur lozenges with "37" marked on centre of each.

141/37. What is the most suitable substance for colouring spirit varnish a jet black?

179/22. Pocock's oils for cattle. Proprietor's address wanted.

A. 180/31. Address of Presewalas Company.

B. 180/31. Reichart's Microtome, maker of.

"BUBBLES."

This artistic SHOWCARD, measuring $21\frac{1}{2}$ in. by 30 in.,
the *chef-d'œuvre* of

SIR JOHN E. MILLAIS, B.T. R.A.

produced at a cost of

£20,000,

is now ready for delivery, and a copy will be supplied FREE
and Carriage Paid with orders of £5 AND UPWARDS, con-
ditionally upon a fair and proper display being guaranteed.
This Showcard (*of which a duplicate copy cannot be supplied*) is
a fac-simile reproduction of the original, purchased for £2,200.

A. & F. PEARS.

Depots:

LONDON: 71-75 New Oxford Street, w.c., LONDON.

NEW YORK: 365 and 367 Canal Street, NEW YORK.

MELBOURNE: 132 Collins Street West, MELBOURNE.

FACTS SPEAK FOR THEMSELVES!

Results of a voting recently held in the pages of the *British and Colonial Druggist*, as to the most popular makers of the various articles sold by Chemists, reveal the following indisputable facts under the heading of **Menthol Cones**:-

Votes for—

Hockin, Wilson & Co. 65
Christy & Co. 63
Maw 23
Castle Brand 5

161

Votes for—

Shirley's

A1 Brand 644

So that out of 805 votes, **SHIRLEY'S BRAND** obtained **80 per cent.**, whereas all other brands put together obtained but 20 per cent., or comparing each brand separately,

SHIRLEY'S obtained—

Nearly 10 times as many votes as Hockin, Wilson & Co.'s.

Over 10 " " " Christy & Co.'s.

" 23 " " " Maw's.

" 128 " " " Castle Brand.

THE REASON IS SIMPLE.

Every endeavour has always been made to assist the retailer in selling

SHIRLEY'S A1 BRAND MENTHOL CONES,

By giving away Show Cases, Dummy Cones, Handbills, &c., the latest in this way being "**THE LITTLE CRIER.**"



This Elegant Bisouit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:-

Parcel 1, 25/- 4 doz. 2d., 1 doz. 3d., 2 doz. 3½d., 3 doz. 4d., 2 doz. 6d.

Parcel 2, 25/- 4 doz. 6d., 3 doz. 4d., 1 doz. 1s.

Parcel 3, 25/- 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.

Parcel 4, 25/- 1 doz. 9d., 2 doz. 1s., 3 doz. 1s. 6d.

Parcel 5, 40/- 4 doz. 2d., 2 doz. 3d., 3 doz. 3½d., 5 doz. 4d., 4 doz. 6d.

Parcel 6, 40/- 5 doz. 6d., 3 doz. 4d., 2 doz. 1s.

Parcel 7, 40/- 4 doz. 6d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.

Parcel 8, 40/- 4 doz. 1s., 2 doz. 9d., 3 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield on average profit of 50 per cent. to the retailer on his outlay.

1d., 2d. and 3d. **MENTHOL CONES** for those who are obliged to sell cheap shapes.

No. 110v. 1d. Vase shape, 3 doz. on a card, 7/6 gross.

No. 114. 2d. Varnished Pedestal shape, 3 doz. on card, 16/ gross.

No. 115. 3d. Varnished Draughtsman, 2 doz. on card, 20/ gross.

A1 COCAINE MENTHOL TOOTHACHE TUBE.

Sells splendidly; 12 on a card, 3/6 dozen.

SHIRLEY'S 20/ CASE OF SMELLING BOTTLES.

Order one of these cases and you will not regret it. The case is lined with maroon velvet, and has a mirror back. The goods can be got at from the counter, as the case opens from the back. You can rely on a good assortment of bottles being sent you.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQ. LONDON, E.C.,
And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

P. J. PETERSEN & CO.

Wholesale Druggists and Manufacturing Chemists,

CAPE TOWN & KIMBERLEY, CAPE OF GOOD HOPE.

ESTABLISHED 1842.

London Agents—**MESSRS. BORRADAILE & CO., 150 LEADENHALL STREET, E.C.**

P. J. P. & Co. can arrange with Pushing Houses to receive Goods on Commission, for Prompt Sale in this Colony and the adjoining States.

PURE CARBONATE OF LITHIA

and all other Lithia Salts.

MERCURIALS

Calomel, Corrosive Sublimate, Oxides, &c.

IODOFORM

Chloral, Terpene, Osmic Acid, Tannin, Tartar Emetic.

LIQUID CHLORIDE OF METHYL, for the treatment of Rheumatism, Neuralgia, &c.

GRAND PRIX, PARIS EXHIBITION, 1889.

Wholesale from **FUERST BROS., 4 Copthall Building, London, E.C.**

Sole Agents for **BILLAULT, Rue Sorbonne, PARIS.**

N.B.—Stock of the above kept in London.

Telegrams, "Fuerst," London.

Telephone No. 462.

J. ROBBINS & CO.

METHYLENE.

Obtained by the action of Metallic Zinc on Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.

Bottles, 16s.; 5-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

100 POUND ANÆSTHETIC ETHER.

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

In 2-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s., and 10s.

PEROXIDE OF HYDROGEN.

First introduced as a Medicine by Dr. RICHARDSON.

ETHYLATE OF SODIUM

DR. RICHARDSON'S Formula, for removing Nævi, &c. In 4-oz. & 1-lb. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. & 4s. 6d.

STYPTIC COLLOID.

For promoting the Healing of Wounds by the first intention.

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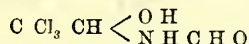
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See that these preparations bear our name.

CHLORALAMID.

THE NEW HYPNOTIC.

Discovered by Prof. Dr. von MERING, of Strassburg.



The following Extracts are from an exhaustive paper just published by Dr. D. R. Paterson (*Lancet*, October 26, 1889), and confirm in many respects the accounts published by Continental authorities:—

"With the view of testing the efficacy of the new remedy, I have given it in fourteen cases of insomnia, including simple sleeplessness and that resulting from phthisis, heart disease, enteric fever, &c. . . I may say here that several observations were made on the temperature, pulse, respiration, and urine, with a negative result. Taking first the results in simple insomnia, we have four cases in which the drug was given, two of them being above sixty years of age. In one instance—an old woman of sixty-four, who had not slept for some time, and used to spend the night sitting up in bed—30 gr. produced on consecutive nights, after an interval of from thirty to forty minutes, a tranquil sleep of eight and nine hours respectively. On both occasions there was some giddiness on awakening, while on the second morning, in addition, she felt sick, and remained drowsy during the forenoon. The dose being then reduced to 15 gr., sleep did not result on an average earlier than from half an hour to an hour and a half. It lasted, however, nearly eight hours, and was free from any of the former unpleasant after-effects—in fact, after taking half-a-dozen doses, she stated her appetite was much better than it had been for some time. A man, sixty years of age, convalescent from an attack of jaundice, and complaining much of resting badly at night, received 30 gr. on several occasions. A sleep of eight hours, on an average, ensued in from forty to seventy-five minutes after administration. The sleep was unbroken, and very sound, and he declared it removed the dull headache from which he had been suffering. Here the drug was used on alternate evenings, and clearly showed its beneficial effects. In a woman, aged fifty, 30-gr. doses were followed by from seven to eight hours' sleep, and disappearance of paroxysmal cough, which was very troublesome. After the first dose there was next morning a feeling of sickness, but this, however, was not observed on any subsequent occasion. The fourth case was a man who had been carefully watched, and was absolutely sleepless for some days after his admission to hospital. Doses of 15 gr. to 30 gr. induced from two to four hours' rest on several occasions, and were sufficient to break, as it were, the sleepless habit. Its influence on the insomnia associated with phthisis, I found, on the whole, satisfactory. A night's rest of from six to seven hours frequently resulted from doses varying from 15 gr. to 40 gr.

"According to Hagen and Auffer, chloralamide has in some cases no action on the insomnia of phthisis, while in others it produces considerable general malaise. The results obtained in two cases of heart disease were encouraging, and would compare favourably with those of any other hypnotic. Doses of 30 gr. in a man suffering from aneurism of the aorta gave fair rest, easing the pain and relieving the cough.

"Insomnia and restlessness resulting from pain were little, if at all, influenced by chloralamide. In two cases—one suffering from disease of the ankle with starting of the foot at night, and the other from dysentery with cramp-like pain in the abdomen—doses of 45 gr. caused, indeed, sleep, but which an attack of pain readily broke. From these few observations it would appear that the new hypnotic is not altogether free from some of the disadvantages attending those already in daily use. Doses of 30 gr. and 45 gr. have been followed by giddiness, feeling of sickness, dryness of the mouth, and even slight delirium—symptoms which, though not alarming, are certainly disagreeable, but which seem to be inseparable from the action of almost all our sleep-producing agents. A comparison of the action of chloral with that of the amide shows that the latter is not so rapid, sleep coming on half an hour to an hour after its administration; whereas after chloral it often results in fifteen minutes. This slight disadvantage, however, is more than compensated for by the almost entire absence of action which chloralamide has on the circulation."

DOSE.—Dr. Paterson has paid special attention to the dose of this substance, and says:—"Usually 30 gr. to 45 gr. suffice in the case of a man, while 20 gr. to 30 gr. will give satisfactory results in a woman. In experiments carried out by Alt, 60 gr. produced in two strong healthy women severe giddiness, symptoms of intoxication, with great excitement, and in one great nausea and retching. Chloralamide has no action on the digestive organs, and the appetite remains unimpaired. That this drug will be a valuable addition to our therapeutical armamentarium is undoubted."

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ELIXIR CHLORALAMID (WYLEYS).

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DOSE.—6 fluid drms. to 1½ oz. Price 3/6 per lb.

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COMPRESSED (Wyleys).

Each Pellet weighs 10 grs. Price 2/6 per ounce.

WYLEYS & CO., MANUFACTURING CHEMISTS, COVENTRY.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND



FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

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Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
Baile Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	Birmingham	Goulding, Messrs.,	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raimes & Co.,	York
Bourne & Taylor,	"	Grindley & Son,	Chester	Raimes & Co.,	Edinburgh
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Sang & Barker,	"
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sanger, J., & Sons,	London
Curling & Co.,	"	Hopkins & Williams,	"	Sim, James, & Co.,	Aberdeen
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Smeeton, W.,	Leeds
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Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Treacher, Hodgkinson & Co.,	London
Dunn & Company,	"	Lynch & Co.,	"	Westrup, J. B.,	Kennington
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westwood & Hopkins,	London
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Woolley, James,	Manchester
Evans, Lescher & Webb,	London	Maw & Son,	"	Wyleys & Brown,	Coventry
Ferris & Co.,	Bristol	Meggesson & Co.,	"	Yates & Co.,	London
Foulger, S., & Son,	London	Mackay, John, & Co.,	Edinburgh		

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Aloin	5/	16/	Quinine, Bisulphate	5/	16/
"	6/	20/	"	5/	18/
"	7/	24/	"	5/6	18/
"	11/	40/	"	7/6	26/
" Compound	7/	24/	"	9/6	34/
" and Strychnine	7/	24/	"	11/6	42/
" Strychnine and Belladonna	7/	24/	" Sulphate	5/	16/
" or Aperient, No. 1 (Clark)	9/	32/	"	5/	16/
" No. 2, No. 3, No. 4	7/	24/	"	6/	20/
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and also the various Formulæ of the Special Preparations of

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they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

OPPENHEIMER'S CREAM OF MALT

(REGISTERED),
WITH COD-LIVER OIL,
AND THE
HYPOPHOSPHITES OF LIME, POTASH, AND SODA.

Can be obtained from all Wholesale Houses, or direct from the Sole Manufacturers,
OPPENHEIMER BROS. & CO., Manufacturing Chemists,
1 & 3 SUN STREET, FINSBURY SQUARE, LONDON, E.C.

CHEMISTS WHO HAVE FAILED

To find a suitable Malt Extract should give Loefflund's a trial. It neither ferments nor crystallises, and is absolutely pure.
In 2 cwt. casks, 28 lb. tins, 7 lb. tins. Also Malt Extract and Cod Liver Oil in Bulk.

**LOEFLUND'S
KINDERMILCH & ALPINE MILK BISCUITS (POWDERED) (INFANT'S FOODS)**

Are prescribed by the leading specialists in diseases of children.

LOEFLUND'S CREAM EMULSION (Cremor Hordeatus)

Is invaluable to those who cannot assimilate Cod Liver Oil.

Sole Agents—**ROBERT BAELEZ & CO., 14-20 ST. MARY AXE, E.C.**

BUY DIRECT FROM THE MANUFACTURERS.

LOFODEN COD LIVER OIL CO.

LOW CASH QUOTATIONS for specified number of
WINCHESTER QUARTS ($\frac{1}{2}$ -gallon).

Special Terms for Bulk supplied from stock at HULL and LONDON.

SAMPLES ON APPLICATION.

Manager—**ARTHUR CLARIDGE, 135 Vine St., Minories, LONDON, E.C.**

C. R. HARKER, STAGG & MORGAN

WHOLESALE & EXPORT DRUGGISTS

MANUFACTURING CHEMISTS

IMPORTERS & DISTILLERS of ESSENTIAL OILS

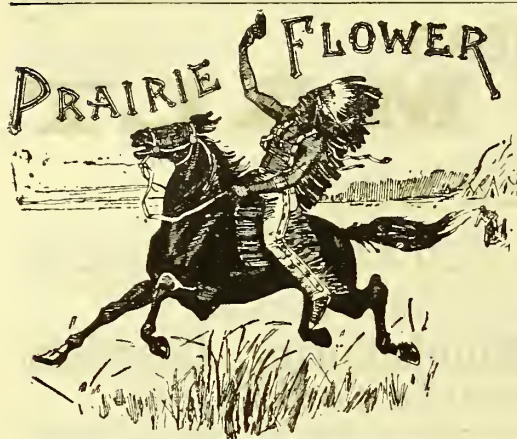
PHARMACEUTICAL EXTRACTS—FLUID AND SOLID.

STANDARDIZED AND GUARANTEED DRUGS AND PREPARATIONS.

15 LAURENCE POUNTNEY LANE, & ARTHUR ST. WEST, LONDON, E.C.

REGISTERED ADDRESS FOR TELEGRAMS—"EDULOINE LONDON." Telephone No. 1949.



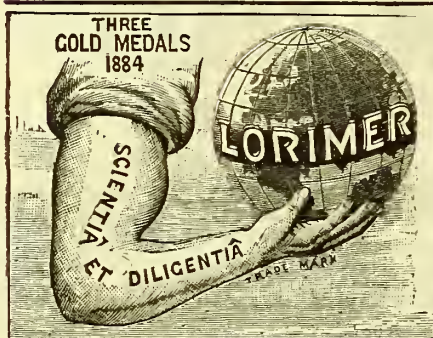


SEQUAH, LIMITED, desire to call the special attention of the Trade to their Preparations—

SEQUAH'S PRAIRIE FLOWER SEQUAH'S OIL,

which have an immense sale all over Great Britain. They wish to point out the fact that all vendors of their Preparations are bound by agreement to Retail Goods at ONE SPECIFIED PRICE ONLY, thus ensuring a fair profit to the Trade, and a mutual protection to manufacturers and retailers.

SEQUAH, LIMITED
46 FARRINGDON STREET, LONDON.



LORIMER & CO.

MANUFACTURING CHEMISTS,
BRITANNIA ROW,

ISLINGTON, N.

MANUFACTURERS OF

Citrate Magnesia, Scaled Preparations, Extract Malt, GOLD MEDAL Chemical Food, Syr. Hypoph. Co., Concentrated Waters 1 to 40, Fluid Extracts for Tinctures, &c., Pearl-coated Pills, Medicated Lozenges, &c., &c. Price Lists on application.

KEEP YOUR EYE ON KOPTICA.

KOPTICA Is the Best, Cheapest, and Safest Remedy for Rheumatism, Neuralgia, Lumbago, Gout, Sciatica, and all kindred Diseases.

FREELY ADVERTISED AND WELL RECOMMENDED.

Books of testimonials, show cards, and every assistance to make a trade from

"KOPTICA CURE," 392 STRAND, LONDON, W.C.

BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE

GENUINE



DR. JOHN HOOPER'S PILLS,

Which may be known by the Name of the Inventor being on the Government Stamp.

Handbills and Show Cards will be sent on application to

MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.

AMERICAN BUYERS are particularly Cautioned !!

Telegraphic Address—"FEEDING BOTTLES LONDON."

DR. LALOR'S PHOSPHODYNE



For TWENTY-FIVE YEARS has maintained its world-wide reputation as THE ONLY SAFE RELIABLE PHOSPHORIC REMEDY ever discovered for the Permanent Cure of Brain Wreckage, Paralysis, Sleeplessness, Harassing Dreams, Premature Decay of Vital Power, and all Functional and Diseased Conditions of the System dependent upon the Deficiency of the Vital Forces. It Cures Dyspepsia, Nerve and Heart Disease. Cures Kidney and Liver Complaints. Cures all Blood Disorders. Cures Consumption and General Debility. Checks all Wasting of the Vital Forces, from whatever cause arising.

THE EFFECT of this Standard Phosphoric Remedy in Nervous Debility and its Kindred Evils is immediate and Permanent, all the Miserable Feelings and Distressing Symptoms disappearing with a rapidity that is REALLY MARVELLOUS.

DR. LALOR'S PHOSPHODYNE

HEALTH, STRENGTH, AND ENERGY.

Is the only Medicine of the kind or name awarded a Certificate of Merit at the Calcutta Exhibition, 1883-4, where all Countries were Exhibitors, and the only Trade Mark—"PHOSPHODYNE"—Registered and Protected under the Trade Marks Act.

THOUSANDS of unimpeachable Testimonials from all parts of the World, and from the highest Medical Authorities, prove conclusively the Verdict Universal that in the World of scientific research no other Phosphoric Preparation has received such exalted praise and distinguished recognition.

Full Printed Directions for the guidance of Patients in the Self-Treatment of the above Diseases are enclosed with each Bottle.

Sold in bottles at 4s. 6d. and 11s. by all Chemists throughout the World.

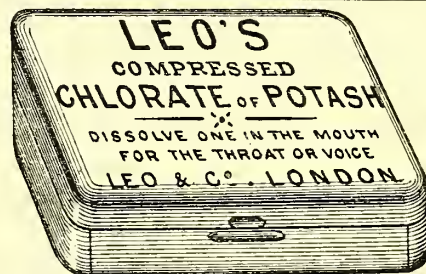
MANUFACTURED ONLY AT

DR. LALOR'S PHOSPHODYNE
LABORATORY,
HAMPSTEAD, LONDON, N.W.

LEO & CO.

MANUFACTURERS OF

**COMPRESSED
CHLORATE OF POTASH,**
Chlorate of Potash and Borax,
&c., &c.



Our Goods are guaranteed the Best of any of the cheap Compressed Goods in the Market.

They are supplied by all the Wholesale Houses.

Quotations given for large and small quantities.

8 CREECHURCH LANE, LONDON, E.C.

C. F. ASCHE & CO.'S HAMBURG

NJIMO SYRUP (The NEW TONIC). NJIMO PILLS.

KAMALA (The Remedy against Tape Worm).

WORM TABLETS. CHOLERA DROPS.

TAMARIND PRESERVES,

PREPARED WITH

Santonin or Pepsin.

PHARMACEUTICAL PREPARATIONS.

FLUID EXTRACTS,
TINCTURES & INFUSIONS,
COMPRESSED DRUGS of all kinds.

TABLETS, OVALS, PILULES, GRANULES,
TROCHES, LOZENGES, PASTILLES, CAPSULES.

MEDICINAL CIGARETTES—12 different kinds.

SOLE
AGENTS:

FUERST BROS.,

4 COPTHALL BUILDINGS,
LONDON, E.C.

Telegrams—"FUERST LONDON."

Telephone No. 462.

LOFTHOUSE & SALTMER, MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS, HULL,

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles.
QUOTATIONS ON APPLICATION.

SOLUT. ÆTHERIS NITROSI (Æther. Hyponit.)

1 part to 5 Sp. Vial Rect. 56 o.p. makes Sp. Æth. Nit. 850.

This concentrated preparation, carefully drawn in our own laboratory, is highly recommended, and daily finding increased favour with the trade for making Sp. Nitre, as required for use, thus avoiding the risk of loss of Nitrous Æther, and the development of free acid, both of which are almost certain to occur in Spts. Nitre which has been some time drawn.

Price in 1lb. Bottles. 3s. per lb.; in Winchester Quarts, 2s. 10d. per lb., net.

Importers of Cod Liver, Castor, and Olive Oils; Otto de Rose, and all Essential Oils; Valerian Safran; Vanillas; Fruit Essences; Carmine; Aniline Dyes; Bees Wax, &c., &c. Applications for Special Quotations invited.

"FOR THE BLOOD IS THE LIFE."

CLARKE'S WORLD FAMED BLOOD MIXTURE, THE GREAT BLOOD PURIFIER AND RESTORER.

(Trade Mark—"BLOOD MIXTURE." Registered No. 3275)

The Celebrated CURE FOR Scrofula, Scurvy, Eczema, Blood and Skin Diseases, and Sores of all kinds.

Wholesale of all the Wholesale Houses. Usual terms.

Sole Proprietors, THE LINCOLN & MIDLAND COUNTIES' DRUG COMPANY, LINCOLN.

Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.
CAUTION.—The Proprietors will take immediate proceedings against all persons pirating their Trade Mark, "Blood Mixture," Labels, Wrappers, &c., or Advertisements, or in any way infringing their rights.

Trade Notice.]



[Trade Notice.

ATKINSON & BARKER'S ROYAL INFANTS' PRESERVATIVE.

Established by 90 years' experience as a safe and effective Medicine.

Sold universally by Chemists and Patent Medicine Dealers.

WHOLESALE AND EXPORT ORDERS SUPPLIED FROM THE MANUFACTORY—

11 RUSSELL STREET, DOWNING STREET, MANCHESTER.

SHOW CARDS AND BILLS ON APPLICATION.

Established
1843.

THOMPSON & CAPPER, WHOLESALE & EXPORT HOMŒOPATHIC CHEMISTS,

Established
1843.

55 BOLD STREET, LIVERPOOL,

And (late HENRY TURNER & CO.)

51 PICCADILLY, MANCHESTER.

ILLUSTRATED PRICE LIST ON APPLICATION.

THOMPSON & CAPPER'S DENTIFRICE WATER.

Sells well everywhere, its beneficent qualities being attested to by physicians in all parts of the world. (See Testimonials.)

In 1s. 6d., 2s. 6d., 4s. 6d., and 8s. 6d. Bottles.

Wholesale Agents for the Dominion of Canada:—EVANS, SONS & MASON Limited, MONTREAL.

TRADE MARK.



SODEN MINERAL PASTILLES

TRADE MARK.



Universally Acknowledged the Best Remedy for Affections of the THROAT, CHEST, and LUNGS. Recommended by the greatest Medical Authorities, especially by SIR MORELL MACKENZIE, whose Testimonial is affixed to each box.

They are irresistible in the cure of all Chronic Catarrhal Affections, as

Coughs, Colds, Bronchitis, Asthma, Irritation, Diphtheria,
and Catarrh of the Stomach.

They are Nature's own Medicine, and contain neither drugs nor anodynes; may therefore be safely given even to children of tender age. Nobody old or young, should ever be without them, their effect being equally wonderful as a

PREVENTIVE AND A CURATIVE.

Sold in Boxes, 1s. 1½d., by all Chemists, and by the

SODEN MINERAL PRODUCE COMPANY, LIMITED,
52 BREAD STREET, CHEAPSIDE, LONDON.

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.
It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

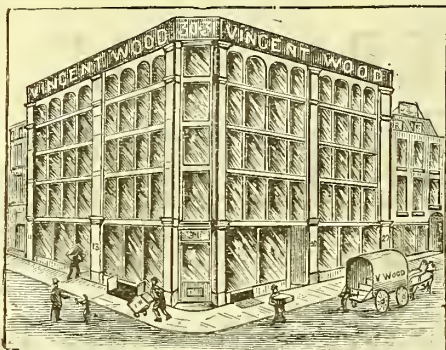
All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.



"EUREKA"

FAIR PLAY A JEWEL.

As we live in the days of copyism, and unscrupulous traders of no originality rob us of our inventions, I would claim protection for my invention, viz.: "The EUREKA" Medicated Pine Wool Felt Appliances, for the following reasons:—

For three years I was studying the manufacture of this Felt and the manipulating of the Drugs embodied therein, having for my guidance a qualified expert.

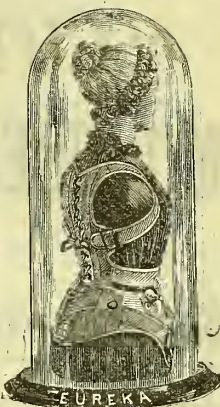
I challenge anyone to prove their placing upon the market a medicated Felt previous to October 1, 1887, the date of my first introducing my Pine Felt.

I can affirm that some of the imitations do not contain the slightest virtue as regards medicaments other than a sprinkling of an essential oil.

They say imitation is the sincerest flattery, and as there are now a great many I simply how to the (not required) honour.

To those who require the original articles, insist upon examining the goods which have the trade mark "EUREKA" upon the Felt, and the label attached bears the name of E. J. G. Berkley, L.R.C.P., Ldn., M.R.C.S., &c.

These goods are stocked by the Principal Wholesale Houses, or, if difficulty be experienced in procuring, direct from the Inventor (Wholesale only).



VINCENT WOOD,

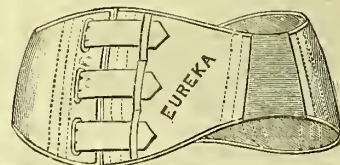
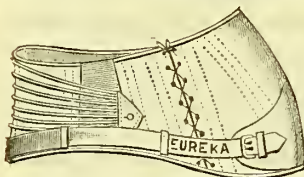
MANUFACTURER OF SURGICAL APPLIANCES. [Established 50 Years.]
29, 30, 31 Paternoster Square, and 11, 12, and 13 Rose Street, Newgate Street, LONDON, E.C.

Telegraphic Address—"ACME, LONDON."

Depots at New York, Paris, and Brussels. Factories at Stratford, Nottingham, and Rose Street.

The largest Bonâ-fide Manufacturer in the World.

Terra-Cotta Models under Glass Show Cases, Circulars, Show Cards, &c., supplied free of charge to those stocking my goods.



COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole Manufacturer, J. T. COCKING, PLYMOUTH.

Cervical Jacket, No. 1. Cervical Jacket, No. 3.

INSTRUCTIONS FOR MEASUREMENT.

JACKET

(in cases of slight deformity)

Circumference at axilla.

" waist.

" hips.

Length from axilla to great trochanter.

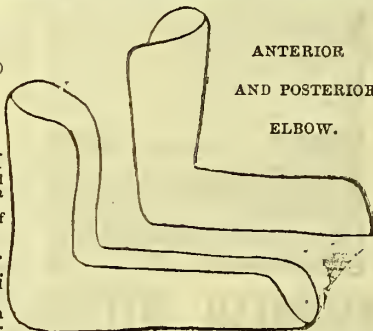
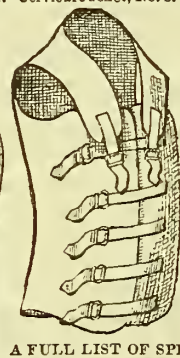
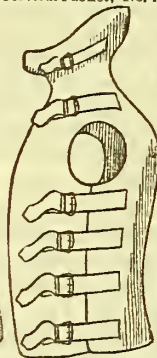
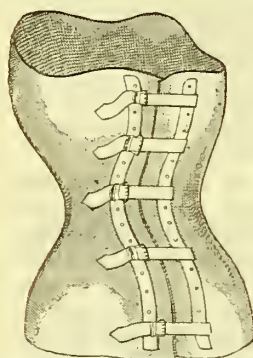
In severe angular cases circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case.

In all cases it must be stated if for male or female.

CERVICAL JACKETS.

Same measurements required, and circumference at neck, and length from neck to axilla.

Any part of the Jacket can in the process of manufacture be left soft.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION

THE SURGEONS' LINT,

V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The O., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES.

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

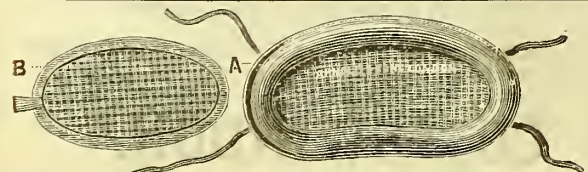
THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME,

London Agents—B. PRATT & CO., 1 Wood Street, E.C.

Spinner and Manufacturer, JERSEY ST. MILLS, ANCOATS, MANCHESTER.

Telegraphic Address—"Newsome, Ancoats," Manchester.



ARNOLD'S Patent SANITARY RESPIRATOR

Vide THE CHEMIST AND DRUGGIST, October 12, 1889:—

"The outer air is inspired through a movable diaphragm of woven Horse-hair, non-absorbent, and covered with silk."

Each supplied with an extra Diaphragm.

Price in Box, Retail, 2s. each; Wholesale, 16s. per dozen.

ARNOLD & SONS, Instrument Manufacturers, 35, 36, & 37 West Smithfield, LONDON.

S. MAW, SON & THOMPSON'S CHEST PROTECTORS AND VESTS

For Shielding the Lungs.

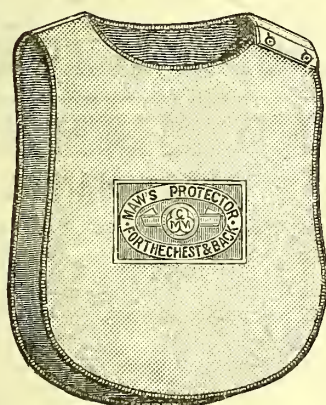


FIG. 3.
Double, for the Chest and Back.

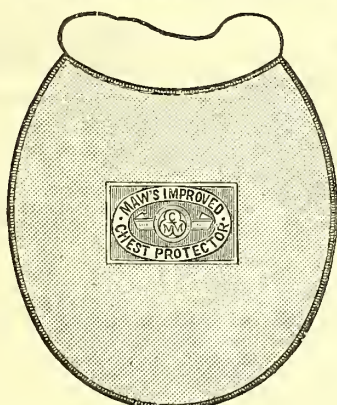


FIG. 4.
Single, Chest Protector.



FIG. 5.
Vest, a Shield for the Lungs.

CHAMOIS AND FLANNEL.

					No. 1	No. 2	No. 3	No. 4
Fig. 3.	Double	...	...	per doz.	20/	26/	32/	39/
	Ditto, perforated...	...	...	"	24/	32/	38/	46/
Fig. 4.	Single...	...	...	"	9/	11/6	13/6	16/
	Ditto, perforated...	...	...	"	11/	14/	16/	19/
Fig. 5.	Vests	"	...	"	27/	34/	42/	51/

FELT, ASSORTED SCARLET AND WHITE.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double, best...	...	per doz.		17/	22/	27/	33/	44/
	Ditto, second	...	"		14/6	19/	23/	28/	37/
Fig. 4.	Single, best ...	...	"		7/6	9/6	11/	14/	20/
	Ditto, second	...	"		6/6	8/	9/6	12/	16/
Fig. 5.	Vests, Scarlet	...	"		17/	22/	27/	33/	40/

FELT, NATURAL UNDYED WOOL.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.		18/	24/	30/	36/	50/
Fig. 4.	Single ..	...	"		8/	10/	12/	16/	22/

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.



COMFORT FOR THE FEET.

Corns and Bunions may be removed, and enlarged Toe Joints reduced, by using *Thompson's New French Corn Plaster*. Sole Proprietor, M. F. THOMPSON, Homœopathic Chemist, 17 GORDON STREET, GLASGOW, from whom the Plaster may be had in Packets, *by post, for fourteen stamps*. Those who are troubled with the discomfort of Corns or Bunions will be glad to have attention called to this remedy, as it removes pain very speedily. It is a simple Plaster, thin as silk, and comfortable to the foot.

Ask your Chemist for it, and take no Substitute.

Wholesale 9/6 per dozen, cash with order, *post free*.
May also be obtained through London Wholesale Houses.

Walking is now really a pleasure to me.

It is put up on Cards. "Very saleable."

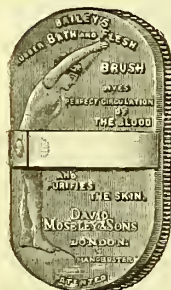
The Original
Arnicated
Corn and
Bunion
Plasters.

ESTABLISHED
A.D.
1846.

Please see that YOUNG'S goods are supplied, as there are many worthless imitations.

HENRY YOUNG, Manufacturer, LONDON.

BAILEY'S RUBBER BRUSHES.



5 inches by 3 inches.

Our Bath and Flesh Brushes have been so well received by the trade, and have met with such ready sale, that it is unnecessary for us to say anything in praise of them here. We shall continue to make them of the very best quality of rubber obtainable, and, as we are advertising them largely, we have every confidence that they will continue to sell well.

PRICE 5/ each (in neat metal cases and with wood handles), or £2 2s. per dozen.

THE NEW RUBBER SHAMPOO BRUSH

SIZE, 7 inches by 7 inches.

The whole as soft and pliant as a silk handkerchief. Eradicates Dandruff, and thoroughly Cleanses the Scalp and Hair of all Impurities, simply by using with pure soap and water. For bathing the Neck and Face, or Children, will be found delightful.

PRICE 3/6 each, or 25/ per dozen.

Price Lists, Air Goods, Water Bottles, Sponge Bags, Elastic Bandages, &c.,
UPON APPLICATION.

DAVID MOSELEY & SONS { 14 Aldermanbury Ave., LONDON, E.C.; Ardwick, MANCHESTER;
MANUFACTURERS, 57 Miller Street, GLASGOW; BRUSSELS and PARIS.

CLEAN HANDS.



Nothing has ever been invented that will so thoroughly cleanse and whiten the hands as our rubber brushes. Used with soap and water they will remove all kinds of stains without injuring the most delicate skin. They are made of the best Para Rubber, and will last for years.

Price, with wooden handles, 1/ and 2/ each retail, or 8/ and 17/ per doz.

PENNY PACKED GOODS.

INSECT POWDER
REFINED BORAX
MAGNESIA
STARCH GLOSS
CAMOMILE FLOWERS
SENNA LEAVES
PLASTERS
BAKING POWDERS
EGG POWDERS

BOXED AND CARDED

COCOA NUT OIL POMADE. KID REV.VER.
ORIENTAL POMADE. DUBBIN.
In Gold Lacquered Tins.

Our Penny Packed Goods cannot be beaten, either for Quality or Style. Samples and Quotations with pleasure. State what quantities.

R. H. JESSOP & CO.
Wholesale Druggists,
HALIFAX.

GLYCERINE
CASTOR OIL
CAMPHORATED OIL
COMPOSITION ESSENCE
TOOTHACHE TINCTURE
HAIR OIL
MACHINE OIL
FURNITURE CREAM
NATIONAL RELISH

CARDED, BOXED, OR PARCELS

M. BAILEY & CO. MANUFACTURERS OF DRUGGISTS' SUNDRIES.

M. B. & Co. beg to call the attention of the Trade to the following articles manufactured by them:—
Glass Syringes, Nipple Shields, Breast Exhausters, Fittings for Feeding Bottles, Tubes, and Tube Work in all its branches, &c., &c.

Sole Proprietors and Manufacturers of J. Brooks & Co.'s celebrated Specialities:—Winter Cream, Lip Salve, Solidified Camphor Cream, Glycerine Jelly, Perfumery, &c., &c.

Buyers are cautioned against imitations of these World-renowned preparations. None are genuine unless bearing our Registered Trade Mark.

MAY BE OBTAINED THROUGH ANY OF THE WHOLESALE HOUSES. WHOLESALE AND EXPORT ONLY FROM

M. BAILEY & CO., 32 and 34 Buckingham Road, KINGSLAND, N.



All
Wholesale
Houses.

PEPPER MÖLLERS

43
SNOW HILL
E.C.

LONDON, CHRISTIANIA, STAMSUND, AND SYLTEFJORD.

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PRIZE MEDAL FOR
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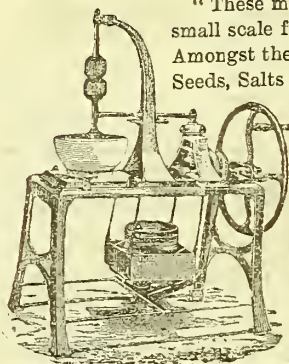
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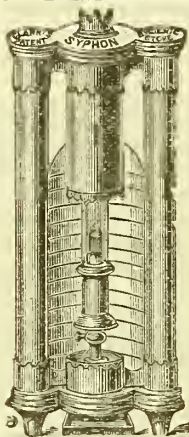
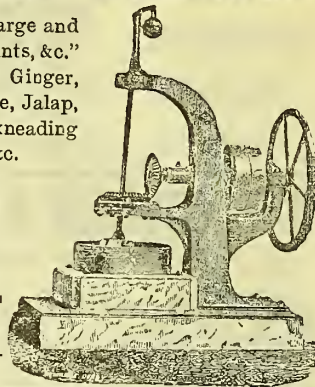
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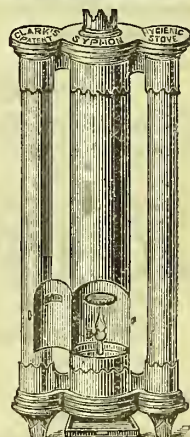
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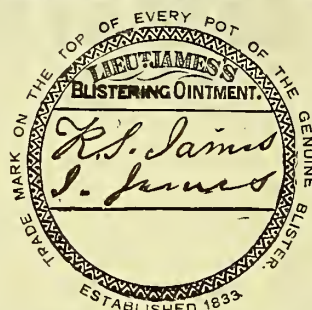
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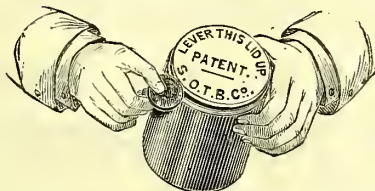
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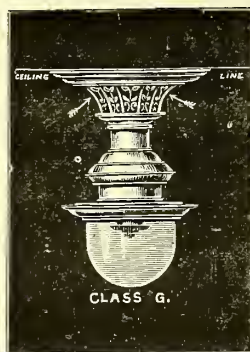


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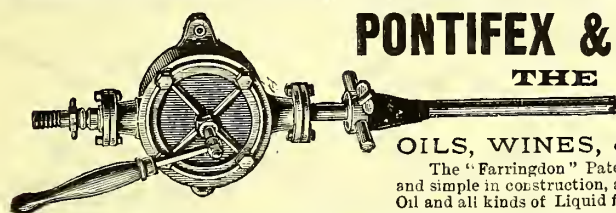
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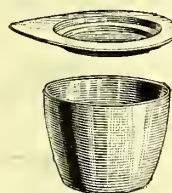
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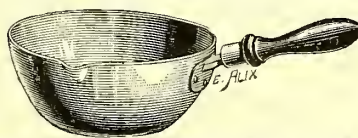


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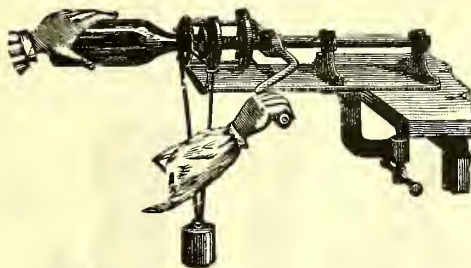
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This pure, health-restoring aperient cleans the coats of the stomach, and increases the activity of the liver. To be obtained of Chemists, and of Messrs. BARCLAY & SON (Lim.), 95 Farringdon Street, London: price 2/6: sample bottles, by post, 2/9.
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Strongest, Cheapest, and Best for all seasons. Acknowledged to be superior to all others.
FLETCHER'S PINO-PHENOL DISINFECTANT FLUID.
As used by Corporations, Local Boards, Hospitals, &c.
LIBERAL TERMS. AGENTS WANTED.
40-gallon casks offered to Chemists and Druggists for retailing at special rates.
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Mechanical work from impressions or models. Moderate charges, inclusive of materials.
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BRONZE MEDAL, PARIS EXHIBITION, 1889.
Possesses an exquisite and penetrating perfume. Keeps the teeth healthy and white. It is a certain preservative for the teeth and an infallible cure for all dental affections.
Bottles at 1/8, 3/4, 5/6, 9/6, and 16/.
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(VIN. AURANT. P.B.)
Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In cask: 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall. carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable.
Sample six stamps. Special quotations to large buyers.

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Certificate of Analysis on each tin. **Fruit-Salt**
Manufactured by **W. G. DUNN & CO.** **Baking Powder**
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Works—Croydon, Surrey.
"THE COOK'S BEST FRIEND."
Price List and Sample on application.

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Prepared only by **CRITCHLEY, BLACKBURN, and 141, Australia Avenue, LONDON, E.C.**
Makes starched linen like new. Does not stick to spider-like materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in 1 lb. tins, 1d., 2d., 6d., and 1s. each. Write for quotations.

The Only Award, Edinburgh Exhibition, 1886.
FLEXIBLE Send for Samples and Price List.
Send for **GELATINE CAPSULES** IN BULK.
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J. & D. MACNAIR & CO., 39 Robert St., Manchester, and 3 Bridge St., Glasgow.
IMPORTERS OF **SHELLAC, GUMS, ETC.**
Send for prices and samples.

HAND-PICKED GUM ARABIC.
Wholesale and Export Druggists before buying elsewhere should apply to
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10 & 11 MINCING LANE, LONDON, E.C.

FOUND DEAD
BY SANFORD'S RAT POISON.
"I have found 145 rats killed in my farm buildings by it."—G. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—A. Cook, Orange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.
SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 20 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. (Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).)

PURE WHITE BEESWAX

Guaranteed pure, of the best quality, in blocks, cakes, or other forms.
Candles, and all other articles manufactured of Beeswax,
at the lowest possible prices.

QUOTATIONS FREE ON BOARD HAMBURG AND OTHER PORT

Lüneburger Wachsbleiche Wax Bleaching Works,
LUNEBURG GERMANY.

For ASTHMA, CONSUMPTION, COUGHS, COLDS, BRONCHITIS
THROAT AFFECTIONS, SHORTNESS OF BREATH, and all
DISORDERS of the CHEST



Give immediate relief.

Prepared only by DA SILVA & CO., 26 Bride Lane, Fleet Street LONDON.
Sold by all Druggists at 1/11, 2/9, 4/6, and 11/ per box.

S.V.R.

In 40-gallon returnable iron casks, pure tinned, with screw
bungs, interchangeable brass taps and spanners for open-
ing. Farina, Dextrin, Glucose, Alcohol absolut., Fusel
Oil, Pear Oil, Lime-Soda- Lead- Acetates, Verd'gris, Acetic Acid, Wood
Naphtha, Charcoal, Ammonia liquid 880-900, anhydrous, Sodium Sulphide
Nitrite 96/93 %, Iromides, Iodides, Chloralhydrate, Boracic Acid, Sul-
phate of Copper, Permanganate of Potash, Ol. Caryophyll., Menth. Pip.,
Pini, Juniperi.

HUGO LORENZ, 7.8 Idol Lane, LONDON, E.C.

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TRIPLE. EXTRACTS. CONCENTRATED.
8s. 6d. per Pint; Three Pints, 8s. 3d.

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"GOOD TEETH, GOOD DIGESTION."—ABERNETHEY.

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TOOTH PASTE.**

1/-, AT 6/6 PER DOZEN.

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SHAVING CREAM.**

"Makes Shaving a Pleasure." 1/-, at 7/6 per dozen.

These articles are put up in half-dozen show-boxes for the Counter, and
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BEST AND SAFEST

DENTIFRICE

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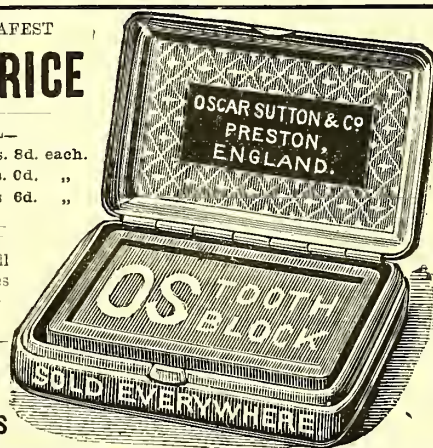
No 0 Loose.. Os. 8d. each.

„ 1. In tins 1s. 0d. „

„ 2. Glass.. 2s 6d. „

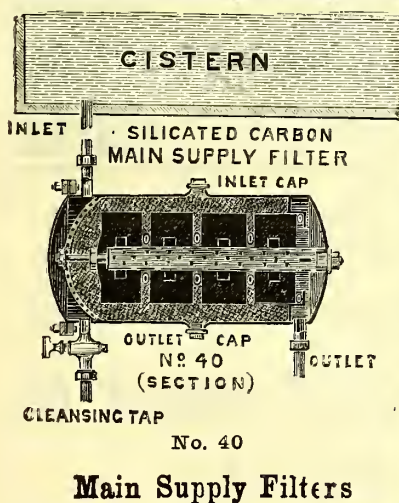
Wholesale of all
the leading houses
throughout the
world.

OVER
2,000
TESTIMONIALS



SILICATED CARBON

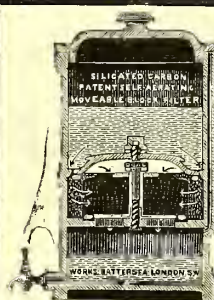
PATENT SELF-AERATING MOVABLE BLOCK FILTERS.



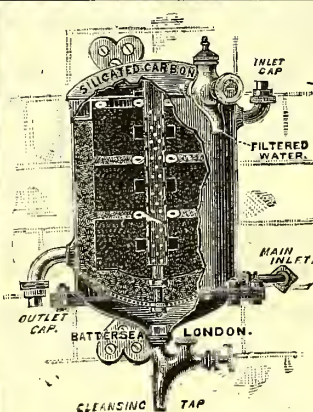
By the use of these Filters, which are
of everyday sale, the Flatness of Taste
so common in Filtered water is entirely
Obliterated.



No. 38.
Glass Table
Filters.



No. 27.
Domestic
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No. 50.
Constant Supply
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WRITE FOR FULL ILLUSTRATED PRICE LISTS AND TERMS TO THE
SILICATED CARBON FILTER CO., BATTERSEA, LONDON, S.W.

COOK'S ANTISEPTIC SOAP

(THOMSON'S PATENT),

Has been tested in a Physiological Laboratory as a Germ Destroyer, and proved to be more efficient than any other experimented with.
(See "Journal of Chemical Industry, 1883, No. 3.) Of great value in CASES OF**ECZEMA, RINGWORM, SCABIES, FAVUS**
AND OTHER SKIN DISEASES.

See "The Lancet," 12 May, 1883, page 936.

Price in 3-Tablet Boxes, per doz. **12/-**; Selling Price, **1/6**; in $\frac{1}{4}$ -gross Boxes, **10/6** per box.**GOLD MEDAL, PARIS EXHIBITION, 1889.**

Can be obtained through MESSRS. S. MAW, SON & THOMPSON, LONDON, or of

EDWARD COOK & CO., HOUSEHOLD and TOILET **SOAP MAKERS, LONDON, E.****EDWARDS' INSTANTANEOUS HARLENE**

Positively forces the HAIR, WHISKERS, and MOUSTACHIOS to grow heavily in a few weeks without injury to the skin, and no matter at what age. The world-renowned remedy for baldness from whatever cause arising. As a producer of whiskers and moustachios it has never been equalled. As a curer of weak and thin eyelashes, or restoring grey hair to its original colour, it never fails.

1/-, 2/6, 3/6, and 5/6 per Bottle.

NOTICE.—Show-cards and Circulars, Terms, and all other Particulars may be had by writing direct to us.

Agents Wanted, Country and Abroad.

EDWARDS & CO.

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**EWEN'S LARD**

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GUARANTEED PURE.EVERY GENUINE PACKAGE BEARS THEIR LABEL
Trade Mark. Trade Mark.**EWEN'S**

Clarified Fat Works,

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Facsimile of Label. Facsimile of Label.

KENNEDY COMPANY'S

ARNICA TOOTH SOAPPerfumes the Breath, Whitens the Teeth,
and Strengthens and Preserves the
Gums.

SAMPLES AND PARTICULARS ON APPLICATION.

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**"PRICE'S
GLYCERINE"**

(Originally Introduced in 1855).

Guaranteed free from ARSENIC
and all other impurities.

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SPECIAL**INDIARUBBER
POROUS PLAISTERS.****STRENGTHENING, BELLADONNA,
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Manufactured by

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SEND FOR SAMPLE GROSS.

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Chemists are respectfully informed that by purchasing one gross of any of the above their own Names and Addresses may be printed upon the wrapper and back cloth of each plaister.

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Respectfully invite the attention of Chemists to the subjoined Term for their CHEST PROTECTORS, which are made of the very best quality materials as hitherto.

THEY DO NOT SUPPLY SECOND QUALITY. ONLY THE BEST!

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number.

324 CHAMOIS AND FLANNEL.

	No. 1	2	3	4	5	6
Gents'	per dozen 10/6	12/6	14/6	17/	23/	—
Ladies'	" 7/6	9/6	11/6	14/	20/	—
Children's	"		6/			

325 FELT, SCARLET, OR WHITE.

	No. 1	2	3	4	5	6
Gents'	10/	11/6	13/6	16/	21/	27/
Ladies'	7/	9/	11/	13/6	19/	22/
Children's	"		5/			

Sizes of above—No. 1, 9 × 10 in.; No. 2, 9½ × 11 in.; No. 3, 10½ × 12 in.; No. 4, 12 × 14 in.; No. 5, 13 × 15 in.
No. 6, 14 × 16 in.

	No. 1	2	3	4	5	6
326 "DREADNOUGHT," felt, covering chest and back	16/6	22/	27/	33/	44/	50/
Children's			12/6			

326A "DREADNOUGHT," chamois and flannel, per doz., No. 1, 18/; No. 2, 24/; No. 3, 30/; No. 4, 36/; No. 5, 48/6; No. 6, 55/.

326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

326C "WAISTCOAT PATTERN," felt, scarlet and white, per doz., No. 1, 20/; No. 2, 28/6; No. 3, 36/; No. 4, 44/; No. 5, 54/6; No. 6, 67/.

326D "CUIRASS," chamois and flannel, per doz., No. 1, 26/6; No. 2, 33/; No. 3, 39/6; No. 4, 47/6; No. 5, 59/6; No. 6, 72/.

327 "CUIRASS," felt, reaching from neck to hips, front and back, and fastening with laces and eyelets, five sizes, per doz., No. 1, 24/; No. 2, 30/; No. 3, 36/; No. 4, 43/; No. 5, 54/; No. 6, 66/.

(Sizes of "Cuirass"—No. 1, 11½ × 9½ in.; No. 2, 13 × 11 in.; No. 3, 16 × 11½ in.; No. 4, 17 × 13 in.; No. 5, 18 × 14 in.; No. 6, 18 × 17½ in.)

327A CUIRASS JACKETS, with half sleeves, buttoning down front, made of perforated chamois leather and porous scarlet flannel, in four sizes, each, 32 × 18 in., 6/6; 34 × 18½ in., 7/6; 37 × 20½ in., 8/6; 39 × 21 in., 9/6.

(Larger or smaller sizes made to order.)

CHEST PROTECTORS MADE OF PINE FELT.

Specially Recommended for Rheumatism.

SINGLE—	No. 1	2	3	4	5
Ladies'	per dozen 7/6	9/6	11/6	14/	20/
DOUBLE, Covering—					
Chest and back	16/6	22/	27/	33/	44/

Ordinary Quantity	10% Monthly Account.
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THE BEST NATURAL APERIENT.

The APOLLINARIS COMPANY, LIMITED, London, beg to announce that, as numerous Hungarian Aperient Marks, Names, and Designations used for the Hungarian Aperient them, they have now adopted an comprising their Registered

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This Label will henceforth also serve APERIENT WATER SOLD BY THE COM-

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and insist upon receiving the HUNGARIAN APERIENT WATER of the APOLLINARIS COMPANY, LIMITED, London.

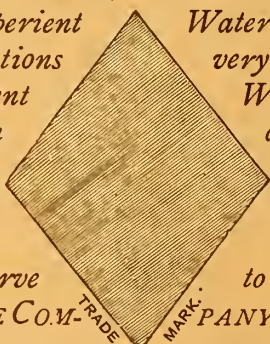
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Waters are offered to the public with very similar to those which are Water so long imported by additional Label of their own, Trade Mark of selection, consists of

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to distinguish the HUNGARIAN PANY from all other Aperient Waters.

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Cadbury's Cocoa IS SOLUBLE
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